

SEQUENCE LISTING

<110> Zhang, Hong-Xia
Blumwald, Eduardo

<120> PLANT FRUIT WITH ELEVATED POTASSIUM
LEVELS

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<150> US 60/395,637

<151> 2002-07-12

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<212> DNA

<213> *Arabidopsis thaliana*

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<212> PRT
<213> Arabidopsis thaliana

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35 40 45
Ser Ile Thr Ala Leu Leu Ile Gly Leu Gly Thr Gly Val Thr Ile Leu
50 55 60
Leu Ile Ser Lys Gly Lys Ser Ser His Leu Leu Val Phe Ser Glu Asp
65 70 75 80
Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe
85 90 95
Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile Met Leu
100 105 110
Phe Gly Ala Val Gly Thr Ile Ile Ser Cys Thr Ile Ile Ser Leu Gly
115 120 125
Val Thr Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Phe Asp Leu Gly
130 135 140
Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser Val Cys
145 150 155 160
Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu Tyr Ser Leu
165 170 175
Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Val Phe
180 185 190
Asn Ala Ile Gln Ser Phe Asp Leu Thr His Leu Asn His Glu Ala Ala
195 200 205
Phe His Leu Leu Gly Asn Phe Leu Tyr Leu Phe Leu Leu Ser Thr Leu
210 215 220
Leu Gly Ala Ala Thr Gly Leu Ile Ser Ala Tyr Val Ile Lys Lys Leu
225 230 235 240
Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met Met Leu
245 250 255
Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Asp Leu Ser Gly
260 265 270
Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr Thr Trp
275 280 285
His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His Thr Phe Ala
290 295 300
Thr Leu Ser Phe Leu Ala Glu Thr Phe Ile Phe Leu Tyr Val Gly Met
305 310 315 320
Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser Asp Thr Pro Gly
325 330 335
Thr Ser Ile Ala Val Ser Ser Ile Leu Met Gly Leu Val Met Val Gly
340 345 350
Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu Ala Lys
355 360 365

Lys Asn Gln Ser Glu Lys Ile Asn Phe Asn Met Gln Val Val Ile Trp
 370 375 380
 Trp Ser Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala Tyr Asn
 385 390 395 400
 Lys Phe Thr Arg Ala Gly His Thr Asp Val Arg Gly Asn Ala Ile Met
 405 410 415
 Ile Thr Ser Thr Ile Thr Val Cys Leu Phe Ser Thr Val Val Phe Gly
 420 425 430
 Met Leu Thr Lys Pro Leu Ile Ser Tyr Leu Leu Pro His Gln Asn Ala
 435 440 445
 Thr Thr Ser Met Leu Ser Asp Asp Asn Thr Pro Lys Ser Ile His Ile
 450 455 460
 Pro Leu Leu Asp Gln Asp Ser Phe Ile Glu Pro Ser Gly Asn His Asn
 465 470 475 480
 Val Pro Arg Pro Asp Ser Ile Arg Gly Phe Leu Thr Arg Pro Thr Arg
 485 490 495
 Thr Val His Tyr Tyr Trp Arg Gln Phe Asp Asp Ser Phe Met Arg Pro
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 Val Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Thr
 515 520 525
 Glu Arg Asn Pro Pro Asp Leu Ser Lys Ala
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<210> 3
 <211> 542
 <212> PRT
 <213> Ipomoea nil

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 Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Val
 35 40 45
 Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val
 50 55 60
 Ile Leu Leu Ser Gly Gly Lys Ser Ser His Leu Leu Val Phe Ser
 65 70 75 80
 Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala
 85 90 95
 Gly Phe Gln Val Lys Lys Gln Phe Phe Val Asn Phe Met Thr Ile
 100 105 110
 Met Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Cys Ser Ile Ile Ser
 115 120 125
 Phe Gly Ala Val Lys Ile Phe Lys His Leu Asp Ile Asp Phe Leu Asp
 130 135 140
 Phe Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser
 145 150 155 160
 Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Leu Leu Tyr
 165 170 175
 Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val
 180 185 190
 Leu Phe Asn Ala Ile Gln Ser Phe Asp Met Thr Ser Phe Asp Pro Lys
 195 200 205
 Ile Gly Leu His Phe Ile Gly Asn Phe Leu Tyr Leu Phe Leu Ser Ser

210	215	220
Thr Phe Leu Gly Val Gly Ile Gly Leu Leu Cys Ala Tyr Ile Ile Lys		
225	230	235
Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met		240
245	250	255
Met Leu Met Ser Tyr Leu Ser Tyr Ile Met Ala Glu Leu Phe Tyr Leu		
260	265	270
Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr		
275	280	285
Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Arg His Ser		
290	295	300
Phe Ala Thr Leu Ser Phe Val Ala Glu Thr Phe Ile Phe Leu Tyr Val		
305	310	315
Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Val Lys Asn Ser		320
325	330	335
Gln Gly Leu Ser Val Ala Val Ser Ser Ile Leu Val Gly Leu Ile Leu		
340	345	350
Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu		
355	360	365
Ala Lys Lys Asn Ser Ser Asp Lys Ile Ser Phe Arg Gln Gln Ile Ile		
370	375	380
Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala		
385	390	395
Tyr Asn Lys Phe Thr Thr Ser Gly His Thr Ser Leu His Glu Asn Ala		400
405	410	415
Ile Met Ile Thr Ser Thr Val Thr Val Val Leu Phe Ser Thr Val Val		
420	425	430
Phe Gly Leu Met Thr Lys Pro Leu Ile Asn Leu Leu Pro Pro His		
435	440	445
Lys Gln Met Pro Ser Gly His Ser Ser Met Thr Thr Ser Glu Pro Ser		
450	455	460
Ser Pro Lys His Phe Thr Val Pro Leu Leu Asp Asn Gln Pro Asp Ser		
465	470	475
Glu Ser Asp Met Ile Thr Gly Pro Glu Val Ala Arg Pro Thr Ala Leu		480
485	490	495
Arg Met Leu Leu Arg Thr Pro Thr His Thr Val His Arg Tyr Trp Arg		
500	505	510
Lys Phe Asp Asp Ser Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe		
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Val Pro Phe Val Ala Gly Ser Pro Val Glu Gln Ser Pro Arg		
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<210> 4
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<212> PRT
<213> Suaeda maritima

<400> 4

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Leu Leu Arg Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg		
35	40	45
Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ser Thr Gly		
50	55	60

Ile Ile Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val
 65 70 75 80
 Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
 85 90 95
 Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile
 100 105 110
 Thr Ile Ile Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Ile Ile
 115 120 125
 Ile Ser Leu Gly Ser Ile Ala Ile Phe Gln Lys Met Asp Ile Gly Ser
 130 135 140
 Leu Glu Leu Gly Asp Leu Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr
 145 150 155 160
 Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu
 165 170 175
 Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser
 180 185 190
 Val Val Leu Phe Asn Ala Ile Gln Asn Phe Asp Leu Thr His Ile Asp
 195 200 205
 His Arg Ile Ala Phe Gln Phe Gly Gly Asn Phe Leu Tyr Leu Phe Phe
 210 215 220
 Ala Ser Thr Leu Leu Gly Ala Val Thr Gly Leu Leu Ser Ala Tyr Val
 225 230 235 240
 Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala
 245 250 255
 Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe
 260 265 270
 Tyr Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser
 275 280 285
 His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys
 290 295 300
 His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Ile Phe Ile Phe Leu
 305 310 315 320
 Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Ser
 325 330 335
 Asp Ser Pro Gly Thr Ser Val Ala Val Ser Ser Ile Leu Leu Gly Leu
 340 345 350
 His Met Val Gly Arg Ala Ala Phe Val Phe Pro Phe Ala Phe Leu Met
 355 360 365
 Asn Leu Ser Lys Lys Ser Asn Ser Glu Lys Val Thr Phe Asn Gln Gln
 370 375 380
 Ile Val Ile Trp Trp Ala Gly Leu Met Lys Ser Ala Val Ser Val Ala
 385 390 395 400
 Leu Ala Tyr Asn Gln Phe Ser Arg Ser Gly His Thr Gln Leu Arg Gly
 405 410 415
 Asn Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr
 420 425 430
 Met Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Leu Phe Met Leu Pro
 435 440 445
 Gln Pro Lys His Phe Thr Ser Ala Ser Thr Val Ser Asp Leu Gly Ser
 450 455 460
 Pro Lys Ser Phe Ser Leu Pro Leu Leu Glu Asp Arg Gln Asp Ser Glu
 465 470 475 480
 Ala Asp Leu Gly Asn Asp Asp Glu Glu Ala Tyr Pro Arg Gly Thr Ile
 485 490 495
 Ala Arg Pro Thr Ser Leu Arg Met Leu Leu Asn Ala Pro Thr His Thr
 500 505 510
 Val His His Tyr Trp Arg Arg Phe Asp Asp Tyr Phe Met Arg Pro Val

515	520	525
Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Thr Glu		
530	535	540
Gln Ser Ile Thr Asn Phe Val Thr Glu Asn Ile Ser		
545	550	555

<210> 5
<211> 540
<212> PRT
<213> Petunia x hybrida

<400> 5			
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20	25	30	
Ile Cys Ala Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp			
35	40	45	
Met Asn Glu Ser Ile Thr Ala Leu Val Ile Gly Ser Cys Thr Gly Ile			
50	55	60	
Val Ile Leu Leu Ile Ser Gly Gly Lys Asn Ser His Ile Leu Val Phe			
65	70	75	80
Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn			
85	90	95	
Ala Gly Phe Gln Val Lys Lys Ser Phe Phe Arg Asn Phe Ser Thr			
100	105	110	
Ile Met Leu Phe Gly Ala Leu Gly Thr Leu Ile Ser Phe Ile Ile Ile			
115	120	125	
Ser Leu Gly Ala Ile Gly Ile Phe Lys Lys Met Asn Ile Gly Ser Leu			
130	135	140	
Glu Ile Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp			
145	150	155	160
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu			
165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val			
180	185	190	
Val Leu Phe Asn Ala Ile Gln Asn Phe Asp Leu Ser His Ile Asp Thr			
195	200	205	
Gly Lys Ala Met Glu Leu Val Gly Asn Phe Leu Tyr Leu Phe Ala Ser			
210	215	220	
Ser Thr Ala Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile			
225	230	235	240
Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Ile			
245	250	255	
Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Tyr			
260	265	270	
Leu Ser Ala Ile Leu Thr Val Phe Phe Ser Gly Ile Val Met Ser His			
275	280	285	
Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His			
290	295	300	
Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Ile Phe Leu Tyr			
305	310	315	320
Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Val Ser Asp			
325	330	335	
Ser Pro Gly Ile Ser Val Gln Val Ser Ser Ile Leu Leu Gly Leu Val			
340	345	350	

Leu Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Thr Lys Lys Thr Pro Glu Ala Lys Ile Ser Phe Asn Gln Gln Val
 370 375 380
 Thr Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu
 385 390 395 400
 Ala Tyr Asn Gln Phe Thr Arg Gly Gly His Thr Gln Leu Arg Ala Asn
 405 410 415
 Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Val
 420 425 430
 Val Phe Gly Leu Met Thr Lys Pro Leu Ile Arg Ile Leu Leu Pro Ser
 435 440 445
 His Lys His Leu Ser Arg Met Ile Ser Ser Glu Pro Thr Thr Pro Lys
 450 455 460
 Ser Phe Ile Val Pro Leu Leu Asp Ser Thr Gln Asp Ser Glu Ala Asp
 465 470 475 480
 Leu Glu Arg His Val Pro Arg Pro His Ser Leu Arg Met Leu Leu Ser
 485 490 495
 Thr Pro Ser His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asn Ala
 500 505 510
 Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Val Pro Phe Ala Pro
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 Gly Ser Pro Thr Asp Pro Val Gly Gly Asn Leu Gln
 530 535 540

<210> 6
 <211> 555
 <212> PRT
 <213> Torenia hybrida

<400> 6

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								20			25			30	
Thr	Leu	Leu	Cys	Thr	Cys	Ile	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn
						35			40			45			
Arg	Trp	Met	Asn	Glu	Ser	Ile	Ile	Ala	Leu	Ile	Ile	Gly	Leu	Ala	Thr
						50			55			60			
Gly	Val	Ile	Ile	Leu	Leu	Ile	Ser	Gly	Gly	Lys	Ser	Ser	His	Leu	Leu
						65			70			75			80
Val	Phe	Ser	Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Ala	Leu	Pro	Pro	Ile	Ile
						85			90			95			
Phe	Asn	Ala	Gly	Phe	Gln	Val	Lys	Lys	Ser	Phe	Phe	Arg	Asn	Phe	
						100			105			110			
Ala	Thr	Ile	Met	Met	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Phe	Ile
						115			120			125			
Ile	Ile	Ser	Leu	Gly	Thr	Ile	Ala	Phe	Phe	Pro	Lys	Met	Asn	Met	Arg
						130			135			140			
Leu	Gly	Val	Gly	Asp	Tyr	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr
						145			150			155			160
Asp	Ser	Val	Cys	Thr	Leu	Gln	Val	Leu	Ser	Gln	Asp	Glu	Thr	Pro	Leu
						165			170			175			
Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Val	Val	Asn	Asp	Ala	Thr	Ser	
						180			185			190			
Val	Val	Leu	Phe	Asn	Ala	Val	Gln	Asn	Phe	Asp	Leu	Pro	His	Met	Ser

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Thr Ala Lys Ala Phe Glu Leu Val Gly Asn Phe Phe Tyr Leu Phe Ala		
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Thr Ser Thr Val Leu Gly Val Leu Thr Gly Leu Leu Ser Ala Tyr Ile		
225	230	235
Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala		240
245	250	255
Ile Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe		
260	265	270
Asp Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser		
275	280	285
His Tyr Thr Trp His Asn Val Thr Glu Asn Ser Arg Val Thr Thr Lys		
290	295	300
His Thr Phe Ala Thr Leu Ser Phe Val Ala Glu Ile Phe Ile Phe Leu		
305	310	315
Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Ser		320
325	330	335
Gly Ser Met Thr Thr Ser Ala Ala Val Ser Ala Thr Leu Leu Gly Leu		
340	345	350
Val Leu Leu Ser Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser		
355	360	365
Asn Leu Ala Lys Lys Ser Pro Leu Glu Lys Ile Ser Leu Arg Gln Gln		
370	375	380
Ile Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala		
385	390	395
Leu Ala Tyr Lys Gln Phe Thr Arg Glu Gly Leu Thr Val Glu Arg Glu		400
405	410	415
Asn Ala Ile Phe Ile Thr Ser Thr Ile Thr Ile Val Leu Phe Ser Thr		
420	425	430
Val Val Phe Gly Leu Met Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro		
435	440	445
Ser Pro Lys Leu Asn Arg Ser Val Ser Ser Glu Pro Leu Thr Pro Asn		
450	455	460
Ser Ile Thr Ile Pro Leu Leu Gly Glu Ser Gln Asp Ser Val Ala Glu		
465	470	475
Leu Phe Ser Ile Arg Gly Gln Thr Ser Gln Gly Glu Pro Val Ala		480
485	490	495
Arg Pro Ser Ser Leu Arg Met Leu Leu Thr Lys Pro Thr His Thr Val		
500	505	510
His Tyr Tyr Trp Arg Lys Phe Asp Asn Ala Phe Met Arg Pro Val Phe		
515	520	525
Gly Gly Arg Gly Phe Val Pro Tyr Val Pro Gly Ser Pro Thr Glu Arg		
530	535	540
Ser Val Arg Asn Trp Glu Glu Glu Thr Lys Gln		
545	550	555

<210> 7
<211> 542
<212> PRT
<213> Ipomoea tricolor

<400> 7
Met Ala Phe Gly Leu Ser Ser Leu Leu Gln Asn Ser Glu Leu Phe Thr
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20 25 30

Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Val
 35 40 45
 Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val
 50 55 60
 Ile Leu Leu Leu Ser Arg Gly Lys Ser Ser His Leu Leu Val Phe Ser
 65 70 75 80
 Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala
 85 90 95
 Gly Phe Gln Val Lys Lys Gln Phe Phe Val Asn Phe Met Thr Ile
 100 105 110
 Met Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Cys Ser Ile Ile Ser
 115 120 125
 Phe Gly Ala Val Lys Ile Phe Lys His Leu Asp Ile Asp Phe Leu Asp
 130 135 140
 Phe Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser
 145 150 155 160
 Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Leu Leu Tyr
 165 170 175
 Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val
 180 185 190
 Leu Phe Asn Ala Ile Gln Ser Phe Asp Met Thr Ser Phe Asp Pro Lys
 195 200 205
 Ile Gly Leu His Phe Ile Gly Asn Phe Leu Tyr Leu Phe Leu Ser Ser
 210 215 220
 Thr Phe Leu Gly Val Gly Ile Gly Leu Leu Cys Ala Tyr Ile Ile Lys
 225 230 235 240
 Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met
 245 250 255
 Met Leu Met Ser Tyr Leu Ser Tyr Ile Met Ala Glu Leu Phe Tyr Leu
 260 265 270
 Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr
 275 280 285
 Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Arg His Ser
 290 295 300
 Phe Ala Thr Leu Ser Phe Val Ala Glu Thr Phe Ile Phe Leu Tyr Val
 305 310 315 320
 Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Val Lys Asn Ser
 325 330 335
 Gln Gly Leu Ser Val Ala Val Ser Ser Ile Leu Val Gly Leu Ile Leu
 340 345 350
 Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu
 355 360 365
 Ala Lys Lys Asn Ser Ser Asp Lys Ile Ser Phe Arg Gln Gln Ile Ile
 370 375 380
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala
 385 390 395 400
 Tyr Asn Lys Phe Thr Thr Ser Gly His Thr Ser Leu His Glu Asn Ala
 405 410 415
 Ile Met Ile Thr Ser Thr Val Thr Val Val Leu Phe Ser Thr Val Val
 420 425 430
 Phe Gly Leu Met Thr Lys Pro Leu Ile Asn Leu Leu Pro Pro His
 435 440 445
 Lys Gln Ile Ala Ser Gly His Ser Ser Met Thr Thr Ser Glu Pro Ser
 450 455 460
 Ser Pro Lys His Phe Ala Val Pro Leu Leu Asp Asn Gln His Asp Ser
 465 470 475 480
 Glu Ser Asp Met Ile Thr Gly Pro Glu Val Ala Arg Pro Thr Ala Leu

485	490	495
Arg Met Leu Leu Arg Thr Pro Thr His Thr Val His Arg Tyr Trp Arg		
500	505	510
Lys Phe Asp Asp Ser Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe		
515	520	525
Val Pro Phe Val Ala Gly Ser Pro Ala Glu Gln Ser Pro Arg		
530	535	540

<210> 8
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<212> PRT
<213> Arabidopsis thaliana

<400> 8		
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Gln Ala Ala Gly Val Gly Ile Leu Leu Gln Ile Met Met Leu Val Leu		
20	25	30
Ser Phe Val Leu Gly His Val Leu Arg Arg His Arg Phe His Tyr Leu		
35	40	45
Pro Glu Ala Ser Gly Ser Leu Leu Ile Gly Leu Ile Val Gly Ile Leu		
50	55	60
Ala Asn Ile Ser Asp Thr Glu Thr Ser Ile Arg Phe Cys Pro Pro Pro		
65	70	75
Ser Ile Pro Glu Phe Ser Leu Leu Ser Phe Pro Arg Ser Leu Val Cys		
85	90	95
Ser Phe Tyr Ser Val Ser Gly Arg Gly Leu Ile Ser Thr Lys Ser Ser		
100	105	110
Ser Ser Cys Phe Cys Cys Leu Pro Ser Tyr Tyr Ile Leu Cys Phe Asn		
115	120	125
Ile Cys Ile Ser Ser Phe Lys Phe Ala Ala Ala Met Leu Cys Ile Met		
130	135	140
Asp Val Ile Phe Leu Asp Ile Ile His Leu Phe Glu Pro Ser Gln Val		
145	150	155
Ser Val Phe Asn Leu Asn His Ser Phe Leu Thr Leu Glu Pro Leu Leu		
165	170	175
Pro Leu Leu Ser Ser Glu Leu Leu Ser Leu Gln Leu Leu Leu Val Val		
180	185	190
Cys Tyr Leu Gly Gly Ser Met Tyr Leu Met Tyr Lys Leu Pro Phe Val		
195	200	205
Glu Cys Leu Met Phe Gly Ala Leu Ile Ser Ala Thr Asp Pro Val Thr		
210	215	220
Val Leu Ser Ile Phe Gln Val Leu Leu Phe Leu Leu Leu Ser Val		
225	230	235
Ser Thr Gly Tyr Lys Tyr Ser His Asp Val Gly Thr Asp Val Asn Leu		
245	250	255
Tyr Ala Leu Val Phe Gly Glu Ser Val Leu Asn Asp Ala Val Ser Phe		
260	265	270
Tyr Tyr Leu Leu Arg Tyr Trp Ala Leu Pro Phe Lys Thr Met Ser Leu		
275	280	285
Val Asn Arg Gln Ser Ser Ser Gly Glu His Phe Phe Met Val Val Ile		
290	295	300
Arg Phe Phe Glu Thr Phe Ala Gly Ser Met Ser Ala Gly Leu Ala Ile		
305	310	315
Ser Phe Leu Asn Ser Phe Tyr Thr Val Val Phe Thr Leu Leu Ile Leu		
325	330	335

Ser Glu His Ile Val Asn Val Met Ser Leu Phe Ser Leu Phe Ser Thr
 340 345 350
 Ser Ile His Ala Cys Arg Arg Cys Trp Ser Leu Arg His Cys Phe Tyr
 355 360 365
 Thr Leu His Arg Asn Cys Asn Arg Arg Val Met Lys Arg Tyr Thr Phe
 370 375 380
 Ser Asn Leu Ser Glu Ala Ser Gln Ser Phe Val Ser Ser Phe Phe His
 385 390 395 400
 Leu Ile Ser Ser Leu Ala Glu Thr Phe Thr Phe Ile Tyr Met Gly Phe
 405 410 415
 Asp Ile Ala Met Glu Gln His Ser Trp Ser His Val Gly Ala Val Asn
 420 425 430
 Val Phe Gly Cys Ala Tyr Leu Val Asn Leu Phe Arg Gln Glu Asn Gln
 435 440 445
 Lys Ile Pro Met Lys His Gln Lys Ala Leu Trp Tyr Ser Gly Leu Arg
 450 455 460
 Gly Ala Met Ala Phe Ala Leu Ala Leu Gln Ser Leu His Asp Leu Pro
 465 470 475 480
 Glu Gly His Gly Gln Ile Ile Phe Thr Ala Thr Thr Thr Ile Val Val
 485 490 495
 Val Thr Val Thr Phe Val Leu Leu Ile Gly Gly Ser Thr Gly Lys Met
 500 505 510
 Leu Glu Ala Leu Glu Val Val Gly Asp Asp Leu Asp Asp Ser Met Ser
 515 520 525
 Glu Val Asn Ser Arg Arg Ser Thr Leu Ile Ser Leu Asn Ile Gly Ala
 530 535 540
 Ser Ser Asp Glu Asp Thr Ser Ser Ser Gly Ser Arg Phe Lys Met Lys
 545 550 555 560
 Leu Lys Glu Phe His Lys Thr Gly Asp Gly Asp Gly Asp Gly Glu
 565 570 575

<210> 9
 <211> 1146
 <212> PRT
 <213> Arabidopsis thaliana

<400> 9

Met Thr Thr Val Ile Asp Ala Thr Met Ala Tyr Arg Phe Leu Glu Glu
 1 5 10 15
 Ala Thr Asp Ser Ser Ser Ser Ser Ser Ser Lys Leu Glu Ser Ser
 20 25 30
 Pro Val Asp Ala Val Leu Phe Val Gly Met Ser Leu Val Leu Gly Ile
 35 40 45
 Ala Ser Arg His Leu Leu Arg Gly Thr Arg Val Pro Tyr Thr Val Ala
 50 55 60
 Leu Leu Val Ile Gly Ile Ala Leu Gly Ser Leu Glu Tyr Gly Ala Lys
 65 70 75 80
 His Asn Leu Gly Lys Ile Gly His Gly Ile Arg Ile Trp Asn Glu Ile
 85 90 95
 Asp Pro Glu Leu Leu Leu Ala Val Phe Leu Pro Ala Leu Leu Phe Glu
 100 105 110
 Ser Ser Phe Ser Met Glu Val His Gln Ile Lys Arg Cys Leu Gly Gln
 115 120 125
 Met Val Leu Leu Ala Val Pro Gly Val Leu Ile Ser Thr Ala Cys Leu
 130 135 140
 Gly Ser Leu Val Lys Val Thr Phe Pro Tyr Glu Trp Asp Trp Lys Thr

145	150	155	160
Ser Leu Leu Leu Gly Gly Leu Leu Ser Ala Thr Asp Pro Val Ala Val			
165	170	175	
Val Ala Leu Leu Lys Glu Leu Gly Ala Ser Lys Lys Leu Ser Thr Ile			
180	185	190	
Ile Glu Gly Glu Ser Leu Met Asn Asp Gly Thr Ala Ile Val Val Phe			
195	200	205	
Gln Leu Phe Leu Lys Met Ala Met Gly Gln Asn Ser Asp Trp Ser Ser			
210	215	220	
Ile Ile Lys Phe Leu Leu Lys Val Ala Leu Gly Ala Val Gly Ile Gly			
225	230	235	240
Leu Ala Phe Gly Ile Ala Ser Val Ile Trp Leu Lys Phe Ile Phe Asn			
245	250	255	
Asp Thr Val Ile Glu Ile Thr Leu Thr Ile Ala Val Ser Tyr Phe Ala			
260	265	270	
Tyr Tyr Thr Ala Gln Glu Trp Ala Gly Ala Ser Gly Val Leu Thr Val			
275	280	285	
Met Thr Leu Gly Met Phe Tyr Ala Ala Phe Ala Arg Thr Ala Phe Lys			
290	295	300	
Gly Asp Ser Gln Lys Ser Leu His His Phe Trp Glu Met Val Ala Tyr			
305	310	315	320
Ile Ala Asn Thr Leu Ile Phe Ile Leu Ser Gly Val Val Ile Ala Glu			
325	330	335	
Gly Ile Leu Asp Ser Asp Lys Ile Ala Tyr Gln Gly Asn Ser Trp Arg			
340	345	350	
Phe Leu Phe Leu Leu Tyr Val Tyr Ile Gln Leu Ser Arg Val Val Val			
355	360	365	
Val Gly Val Leu Tyr Pro Leu Leu Cys Arg Phe Gly Tyr Gly Leu Asp			
370	375	380	
Trp Lys Glu Ser Ile Ile Leu Val Trp Ser Gly Leu Arg Gly Ala Val			
385	390	395	400
Ala Leu Ala Leu Ser Leu Ser Val Lys Gln Ser Ser Gly Asn Ser His			
405	410	415	
Ile Ser Lys Glu Thr Gly Thr Leu Phe Leu Phe Thr Gly Gly Ile			
420	425	430	
Val Phe Leu Thr Leu Ile Val Asn Gly Ser Thr Thr Gln Phe Val Leu			
435	440	445	
Arg Leu Leu Arg Met Asp Ile Leu Pro Ala Pro Lys Lys Arg Ile Leu			
450	455	460	
Glu Tyr Thr Lys Tyr Glu Met Leu Asn Lys Ala Leu Arg Ala Phe Gln			
465	470	475	480
Asp Leu Gly Asp Asp Glu Glu Leu Gly Pro Ala Asp Trp Pro Thr Val			
485	490	495	
Glu Ser Tyr Ile Ser Ser Leu Lys Gly Ser Glu Gly Glu Leu Val His			
500	505	510	
His Pro His Asn Gly Ser Lys Ile Gly Ser Leu Asp Pro Lys Ser Leu			
515	520	525	
Lys Asp Ile Arg Met Arg Phe Leu Asn Gly Val Gln Ala Thr Tyr Trp			
530	535	540	
Glu Met Leu Asp Glu Gly Arg Ile Ser Glu Val Thr Ala Asn Ile Leu			
545	550	555	560
Met Gln Ser Val Asp Glu Ala Leu Asp Gln Val Ser Thr Thr Leu Cys			
565	570	575	
Asp Trp Arg Gly Leu Lys Pro His Val Asn Phe Pro Asn Tyr Tyr Asn			
580	585	590	
Phe Leu His Ser Lys Val Val Pro Arg Lys Leu Val Thr Tyr Phe Ala			
595	600	605	

Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ala Ala Phe Leu Arg
 610 615 620
 Ala His Thr Ile Ala Arg Gln Gln Leu Tyr Asp Phe Leu Gly Glu Ser
 625 630 635 640
 Asn Ile Gly Ser Ile Val Ile Asn Glu Ser Glu Lys Glu Gly Glu Glu
 645 650 655
 Ala Lys Lys Phe Leu Glu Lys Val Arg Ser Ser Phe Pro Gln Val Leu
 660 665 670
 Arg Val Val Lys Thr Lys Gln Val Thr Tyr Ser Val Leu Asn His Leu
 675 680 685
 Leu Gly Tyr Ile Glu Asn Leu Glu Lys Val Gly Leu Leu Glu Glu Lys
 690 695 700
 Glu Ile Ala His Leu His Asp Ala Val Gln Thr Gly Leu Lys Lys Leu
 705 710 715 720
 Leu Arg Asn Pro Pro Ile Val Lys Leu Pro Lys Leu Ser Asp Met Ile
 725 730 735
 Thr Ser His Pro Leu Ser Val Ala Leu Pro Pro Ala Phe Cys Glu Pro
 740 745 750
 Leu Lys His Ser Lys Lys Glu Pro Met Lys Leu Arg Gly Val Thr Leu
 755 760 765
 Tyr Lys Glu Gly Ser Lys Pro Thr Gly Val Trp Leu Ile Phe Asp Gly
 770 775 780
 Ile Val Lys Trp Lys Ser Lys Ile Leu Ser Asn Asn His Ser Leu His
 785 790 795 800
 Pro Thr Phe Ser His Gly Ser Thr Leu Gly Leu Tyr Glu Val Leu Thr
 805 810 815
 Gly Lys Pro Tyr Leu Cys Asp Leu Ile Thr Asp Ser Met Val Leu Cys
 820 825 830
 Phe Phe Ile Asp Ser Glu Lys Ile Leu Ser Leu Gln Ser Asp Ser Thr
 835 840 845
 Ile Asp Asp Phe Leu Trp Gln Glu Ser Ala Leu Val Leu Leu Lys Leu
 850 855 860
 Leu Arg Pro Gln Ile Phe Glu Ser Val Ala Met Gln Glu Leu Arg Ala
 865 870 875 880
 Leu Val Ser Thr Glu Ser Ser Lys Leu Thr Thr Tyr Val Thr Gly Glu
 885 890 895
 Ser Ile Glu Ile Asp Cys Asn Ser Ile Gly Leu Leu Leu Glu Gly Phe
 900 905 910
 Val Lys Pro Val Gly Ile Lys Glu Glu Leu Ile Ser Ser Pro Ala Ala
 915 920 925
 Leu Ser Pro Ser Asn Gly Asn Gln Ser Phe His Asn Ser Ser Glu Ala
 930 935 940
 Ser Gly Ile Met Arg Val Ser Phe Ser Gln Gln Ala Thr Gln Tyr Ile
 945 950 955 960
 Val Glu Thr Arg Ala Arg Ala Ile Ile Phe Asn Ile Gly Ala Phe Gly
 965 970 975
 Ala Asp Arg Thr Leu His Arg Arg Pro Ser Ser Leu Thr Pro Pro Arg
 980 985 990
 Ser Ser Ser Asp Gln Leu Gln Arg Ser Phe Arg Lys Glu His Arg
 995 1000 1005
 Gly Leu Met Ser Trp Pro Glu Asn Ile Tyr Ala Lys Gln Gln Glu
 1010 1015 1020
 Ile Asn Lys Thr Thr Leu Ser Leu Ser Glu Arg Ala Met Gln Leu Ser
 1025 1030 1035 1040
 Ile Phe Gly Ser Met Val Asn Val Tyr Arg Arg Ser Val Ser Phe Gly
 1045 1050 1055
 Gly Ile Tyr Asn Asn Lys Leu Gln Asp Asn Leu Leu Tyr Lys Lys Leu

1060	1065	1070
Pro Leu Asn Pro Ala Gln Gly Leu Val Ser Ala Lys Ser Glu Ser Ser		
1075	1080	1085
Ile Val Thr Lys Lys Gln Leu Glu Thr Arg Lys His Ala Cys Gln Leu		
1090	1095	1100
Pro Leu Lys Gly Glu Ser Ser Thr Arg Gln Asn Thr Met Val Glu Ser		
1105	1110	1115
Ser Asp Glu Glu Asp Glu Asp Gly Ile Val Val Arg Ile Asp Ser		
1125	1130	1135
Pro Ser Lys Ile Val Phe Arg Asn Asp Leu		
1140	1145	

<210> 10
<211> 555
<212> PRT
<213> Atriplex gmelini

<400> 10		
Met Trp Ser Gln Leu Ser Ser Leu Leu Ser Gly Lys Met Asp Ala Leu		
1	5	10
Thr Thr Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala		
20	25	30
Leu Leu Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg		
35	40	45
Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ala Thr Gly		
50	55	60
Val Val Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val		
65	70	75
Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe		
85	90	95
Asn Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Ile		
100	105	110
Thr Ile Val Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Thr Ile		
115	120	125
Ile Ser Leu Gly Ala Leu Ser Ile Phe Lys Lys Leu Asp Ile Gly Thr		
130	135	140
Leu Glu Leu Ala Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr		
145	150	155
Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu		
165	170	175
Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser		
180	185	190
Val Val Leu Phe Asn Ala Ile Gln Ser Phe Asp Leu Thr Arg Ile Asp		
195	200	205
His Arg Ile Ala Leu Gln Phe Met Gly Asn Phe Leu Tyr Leu Phe Ile		
210	215	220
Ala Ser Thr Ile Leu Gly Ala Phe Thr Gly Leu Leu Ser Ala Tyr Ile		
225	230	235
Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala		
245	250	255
Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe		
260	265	270
Tyr Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser		
275	280	285
His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys		
290	295	300

His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Val Phe Leu Phe Leu
 305 310 315 320
 Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Ser
 325 330 335
 Asp Ser Pro Gly Ile Ser Val Ala Val Ser Ser Ile Leu Leu Gly Leu
 340 345 350
 Val Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Trp Leu Met
 355 360 365
 Asn Phe Ala Lys Lys Ser Gln Ser Glu Lys Val Thr Phe Asn Gln Gln
 370 375 380
 Ile Val Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala
 385 390 395 400
 Leu Ala Tyr Asn Gln Phe Thr Arg Ser Gly His Thr Gln Leu Arg Gly
 405 410 415
 Asn Ala Ile Met Ile Thr Ser Thr Ile Ser Val Val Leu Phe Ser Thr
 420 425 430
 Met Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Met Phe Leu Leu Pro
 435 440 445
 Gln Pro Lys His Phe Thr Ser Cys Ser Thr Val Ser Asp Val Gly Ser
 450 455 460
 Pro Lys Ser Tyr Ser Leu Pro Leu Leu Glu Gly Asn Gln Asp Tyr Glu
 465 470 475 480
 Val Asp Val Gly Asn Gly Asn His Glu Asp Thr Thr Glu Pro Arg Thr
 485 490 495
 Ile Val Arg Pro Ser Ser Leu Arg Met Leu Leu Asn Ala Pro Thr His
 500 505 510
 Thr Val His His Tyr Trp Arg Lys Phe Asp Asp Ser Phe Met Arg Pro
 515 520 525
 Val Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Thr
 530 535 540
 Glu Gln Ser Thr Asn Asn Leu Val Asp Arg Thr
 545 550 555

<210> 11
 <211> 985
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 11
 Met Ala Ile Trp Glu Gln Leu Glu Val Ser Lys Ala His Val Ala Tyr
 1 5 10 15
 Ala Cys Val Gly Val Phe Ser Ser Ile Phe Ser Leu Val Ser Leu Tyr
 20 25 30
 Val Lys Glu Lys Leu Tyr Ile Gly Glu Ser Thr Val Ala Gly Ile Phe
 35 40 45
 Gly Leu Ile Val Gly Pro Val Cys Leu Asn Trp Phe Asn Pro Leu Lys
 50 55 60
 Trp Gly Asn Ser Asp Ser Ile Thr Leu Glu Ile Thr Arg Ile Val Leu
 65 70 75 80
 Cys Leu Gln Ile Phe Ala Val Ala Val Glu Leu Pro Arg Lys Tyr Met
 85 90 95
 Leu Lys His Trp Val Ser Val Thr Met Leu Leu Leu Pro Val Met Thr
 100 105 110
 Ala Gly Trp Leu Ile Ile Gly Leu Phe Val Trp Ile Leu Ile Pro Gly
 115 120 125
 Leu Asn Phe Ser Ala Ser Leu Leu Ile Ser Ala Cys Ile Thr Ala Thr

130	135	140
Asp Pro Ile Leu Ala Gln Ser Val Val Ser Gly Lys Phe Ala Gln Arg		
145	150	155
Val Pro Gly His Leu Arg Asn Leu Leu Ser Ala Glu Ser Gly Cys Asn		160
165	170	175
Asp Gly Met Ala Phe Pro Phe Leu Phe Leu Ser Met Asn Leu Ile Leu		
180	185	190
His Pro Gly Asn Gly Arg Glu Ile Val Lys Asp Trp Ile Cys Val Thr		
195	200	205
Ile Leu Tyr Glu Cys Leu Phe Gly Cys Leu Leu Gly Cys Phe Ile Gly		
210	215	220
Tyr Val Gly Arg Ile Thr Ile Arg Phe Ala Glu Lys Lys Asn Ile Ile		
225	230	235
Asp Arg Glu Ser Phe Leu Ala Phe Tyr Val Val Leu Ala Phe Met Cys		240
245	250	255
Ala Gly Phe Gly Ser Ile Leu Gly Val Asp Asp Leu Leu Val Ser Phe		
260	265	270
Ala Ala Gly Ala Thr Phe Ala Trp Asp Gly Trp Phe Ser Gln Lys Thr		
275	280	285
Gln Glu Ser Asn Val Ser Thr Val Ile Asp Leu Leu Asn Tyr Ala		
290	295	300
Tyr Phe Ile Tyr Phe Gly Ala Ile Ile Pro Trp Ser Gln Phe Asn Asn		
305	310	315
Gly Glu Ile Gly Thr Asn Val Trp Arg Leu Ile Ile Leu Ser Ile Val		320
325	330	335
Val Ile Phe Leu Arg Arg Ile Pro Ala Val Met Ile Leu Arg Pro Leu		
340	345	350
Ile Pro Asp Ile Lys Ser Trp Arg Glu Ala Leu Phe Val Gly His Phe		
355	360	365
Gly Pro Ile Gly Val Gly Ala Ile Phe Ala Ala Ile Leu Ala Arg Gly		
370	375	380
Glu Leu Glu Ser Thr Phe Ser Asp Glu Pro Thr Pro Leu Asn Val Val		
385	390	395
Pro Ser Lys Glu Glu Ser Lys His Trp Gln Leu Ile Ala Cys Ile Trp		400
405	410	415
Pro Ile Thr Cys Phe Phe Ile Val Thr Ser Ile Ile Val His Gly Ser		
420	425	430
Ser Val Ala Ile Ile Thr Leu Gly Arg His Leu Asn Thr Ile Thr Leu		
435	440	445
Thr Lys Thr Phe Thr Thr His Thr Asn Gly Asp Asn Gly Lys Ser		
450	455	460
Ser Trp Met Gln Arg Leu Pro Ser Leu Asp Lys Ala Gly Arg Ser Phe		
465	470	475
Ser Leu His Arg Met Asp Thr Gln Met Thr Leu Ser Gly Asp Glu Gly		480
485	490	495
Glu Ala Glu Glu Gly Gly Arg Lys Gly Leu Ala Gly Gly Glu Asp		
500	505	510
Glu Glu Gly Leu Asn Asn Asp Gln Ile Gly Ser Val Ala Thr Ser Gly		
515	520	525
Ile Pro Ala Arg Pro Ala Gly Gly Met Pro Arg Arg Arg Lys Leu Ser		
530	535	540
Arg Lys Glu Lys Arg Leu Asn Arg Arg Gln Lys Leu Arg Asn Lys Gly		
545	550	555
Arg Glu Ile Phe Ser Ser Arg Ser Lys Asn Glu Met Tyr Asp Asp Asp		560
565	570	575
Glu Leu Asn Asp Leu Gly Arg Glu Arg Leu Gln Lys Glu Lys Glu Ala		
580	585	590

Arg Ala Ala Thr Phe Ala Leu Ser Thr Ala Val Asn Thr Gln Arg Asn
 595 600 605
 Glu Glu Ile Gly Met Gly Gly Asp Glu Glu Glu Asp Glu Tyr Thr Pro
 610 615 620
 Glu Lys Glu Tyr Ser Asp Asn Tyr Asn Asn Thr Pro Ser Phe Glu Ser
 625 630 635 640
 Ser Glu Arg Ser Ser Ser Leu Arg Gly Arg Thr Tyr Val Pro Arg Asn
 645 650 655
 Arg Tyr Asp Gly Glu Glu Thr Glu Ser Glu Ile Glu Ser Glu Asp Glu
 660 665 670
 Met Glu Asn Glu Ser Glu Arg Ser Met Ala Ser Ser Glu Glu Arg Arg
 675 680 685
 Ile Arg Lys Met Lys Glu Glu Glu Met Lys Pro Gly Thr Ala Tyr Leu
 690 695 700
 Asp Gly Asn Arg Met Ile Ile Glu Asn Lys Gln Gly Glu Ile Leu Asn
 705 710 715 720
 Gln Val Asp Ile Glu Asp Arg Asn Glu Ala Arg Asp Asp Glu Val Ser
 725 730 735
 Val Asp Ser Thr Ala His Ser Ser Leu Thr Thr Thr Met Thr Asn Leu
 740 745 750
 Ser Ser Ser Ser Gly Gly Arg Leu Lys Arg Ile Leu Thr Pro Thr Ser
 755 760 765
 Leu Gly Lys Ile His Ser Leu Val Asp Lys Gly Lys Asp Lys Asn Lys
 770 775 780
 Asn Ser Lys Tyr His Ala Phe Lys Ile Asp Asn Leu Leu Ile Ile Glu
 785 790 795 800
 Asn Glu Asp Gly Asp Val Ile Lys Arg Tyr Lys Ile Asn Pro His Lys
 805 810 815
 Ser Asp Asp Asp Lys Ser Lys Asn Arg Pro Arg Asn Asp Ser Val Val
 820 825 830
 Ser Arg Ala Leu Thr Ala Val Gly Leu Lys Ser Lys Ala Asn Ser Gly
 835 840 845
 Val Pro Pro Pro Val Asp Glu Glu Lys Ala Ile Glu Gly Pro Ser Arg
 850 855 860
 Lys Gly Pro Gly Met Leu Lys Lys Arg Thr Leu Thr Pro Ala Pro Pro
 865 870 875 880
 Arg Gly Val Gln Asp Ser Leu Asp Leu Glu Asp Glu Pro Ser Ser Glu
 885 890 895
 Glu Asp Leu Gly Asp Ser Tyr Asn Met Asp Asp Ser Glu Asp Tyr Asp
 900 905 910
 Asp Asn Ala Tyr Glu Ser Glu Thr Glu Phe Glu Arg Gln Arg Arg Leu
 915 920 925
 Asn Ala Leu Gly Glu Met Thr Ala Pro Ala Asp Gln Asp Asp Glu Glu
 930 935 940
 Leu Pro Pro Leu Pro Val Glu Ala Gln Thr Gly Asn Asp Gly Pro Gly
 945 950 955 960
 Thr Ala Glu Gly Lys Lys Lys Gln Lys Ser Ala Ala Val Lys Ser Ala
 965 970 975
 Leu Ser Lys Thr Leu Gly Leu Asn Lys
 980 985

<210> 12
 <211> 633
 <212> PRT
 <213> Saccharomyces cerevisiae

<400> 12

Met Leu Ser Lys Val Leu Leu Asn Ile Ala Phe Lys Val Leu Leu Thr
1 5 10 15
Thr Ala Lys Arg Ala Val Asp Pro Asp Asp Asp Asp Glu Leu Leu Pro
20 25 30
Ser Pro Asp Leu Pro Gly Ser Asp Asp Pro Ile Ala Gly Asp Pro Asp
35 40 45
Val Asp Leu Asn Pro Val Thr Glu Glu Met Phe Ser Ser Trp Ala Leu
50 55 60
Phe Ile Met Leu Leu Leu Ile Ser Ala Leu Trp Ser Ser Tyr Tyr
65 70 75 80
Leu Thr Gln Lys Arg Ile Arg Ala Val His Glu Thr Val Leu Ser Ile
85 90 95
Phe Tyr Gly Met Val Ile Gly Leu Ile Ile Arg Met Ser Pro Gly His
100 105 110
Tyr Ile Gln Asp Thr Val Thr Phe Asn Ser Ser Tyr Phe Phe Asn Val
115 120 125
Leu Leu Pro Pro Ile Ile Leu Asn Ser Gly Tyr Glu Leu Asn Gln Val
130 135 140
Asn Phe Phe Asn Asn Met Leu Ser Ile Leu Ile Phe Ala Ile Pro Gly
145 150 155 160
Thr Phe Ile Ser Ala Val Val Ile Gly Ile Ile Leu Tyr Ile Trp Thr
165 170 175
Phe Leu Gly Leu Glu Ser Ile Asp Ile Ser Phe Ala Asp Ala Met Ser
180 185 190
Val Gly Ala Thr Leu Ser Ala Thr Asp Pro Val Thr Ile Leu Ser Ile
195 200 205
Phe Asn Ala Tyr Lys Val Asp Pro Lys Leu Tyr Thr Ile Ile Phe Gly
210 215 220
Glu Ser Leu Leu Asn Asp Ala Ile Ser Ile Val Met Phe Glu Thr Cys
225 230 235 240
Gln Lys Phe His Gly Gln Pro Ala Thr Phe Ser Ser Val Phe Glu Gly
245 250 255
Ala Gly Leu Phe Leu Met Thr Phe Ser Val Ser Leu Leu Ile Gly Val
260 265 270
Leu Ile Gly Ile Leu Val Ala Leu Leu Leu Lys His Thr His Ile Arg
275 280 285
Arg Tyr Pro Gln Ile Glu Ser Cys Leu Ile Leu Leu Ile Ala Tyr Glu
290 295 300
Ser Tyr Phe Phe Ser Asn Gly Cys His Met Ser Gly Ile Val Ser Leu
305 310 315 320
Leu Phe Cys Gly Ile Thr Leu Lys His Tyr Ala Tyr Tyr Asn Met Ser
325 330 335
Arg Arg Ser Gln Ile Thr Ile Lys Tyr Ile Phe Gln Leu Leu Ala Arg
340 345 350
Leu Ser Glu Asn Phe Ile Phe Ile Tyr Leu Gly Leu Glu Leu Phe Thr
355 360 365
Glu Val Glu Leu Val Tyr Lys Pro Leu Leu Ile Ile Val Ala Ala Ile
370 375 380
Ser Ile Cys Val Ala Arg Trp Cys Ala Val Phe Pro Leu Ser Gln Phe
385 390 395 400
Val Asn Trp Ile Tyr Arg Val Lys Thr Ile Arg Ser Met Ser Gly Ile
405 410 415
Thr Gly Glu Asn Ile Ser Val Pro Asp Glu Ile Pro Tyr Asn Tyr Gln
420 425 430
Met Met Thr Phe Trp Ala Gly Leu Arg Gly Ala Val Gly Val Ala Leu
435 440 445

Ala Leu Gly Ile Gln Gly Glu Tyr Lys Phe Thr Leu Leu Ala Thr Val
 450 455 460
 Leu Val Val Val Leu Thr Val Ile Ile Phe Gly Gly Thr Thr Ala
 465 470 475 480
 Gly Met Leu Glu Val Leu Asn Ile Lys Thr Gly Cys Ile Ser Glu Glu
 485 490 495
 Asp Thr Ser Asp Asp Glu Phe Asp Ile Glu Ala Pro Arg Ala Ile Asn
 500 505 510
 Leu Leu Asn Gly Ser Ser Ile Gln Thr Asp Leu Gly Pro Tyr Ser Asp
 515 520 525
 Asn Asn Ser Pro Asp Ile Ser Ile Asp Gln Phe Ala Val Ser Ser Asn
 530 535 540
 Lys Asn Leu Pro Asn Asn Ile Ser Thr Thr Gly Gly Asn Thr Phe Gly
 545 550 555 560
 Gly Leu Asn Glu Thr Glu Asn Thr Ser Pro Asn Pro Ala Arg Ser Ser
 565 570 575
 Met Asp Lys Arg Asn Leu Arg Asp Lys Leu Gly Thr Ile Phe Asn Ser
 580 585 590
 Asp Ser Gln Trp Phe Gln Asn Phe Asp Glu Gln Val Leu Lys Pro Val
 595 600 605
 Phe Leu Asp Asn Val Ser Pro Ser Leu Gln Asp Ser Ala Thr Gln Ser
 610 615 620
 Pro Ala Asp Phe Ser Ser Gln Asn His
 625 630

<210> 13
 <211> 546
 <212> PRT
 <213> Arabidopsis thaliana

<400> 13

Met	Thr	Met	Phe	Ala	Ser	Leu	Thr	Ser	Lys	Met	Leu	Ser	Val	Ser	Thr
1															15
Ser															
Cys	Ala	Cys	Ile	Val	Ile	Gly	His	Leu	Leu	Glu	Glu	Asn	Arg	Trp	Met
35															45
Asn	Glu	Ser	Ile	Thr	Ala	Leu	Leu	Ile	Gly	Leu	Gly	Thr	Gly	Val	Val
50															
Ile	Leu	Leu	Ile	Ser	Arg	Gly	Lys	Asn	Ser	His	Leu	Leu	Val	Phe	Ser
65															80
Glu	Asp	Leu	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn	Ala
															95
Gly	Phe	Gln	Val	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Val	Thr	Ile	
100															110
Met	Ala	Phe	Gly	Ala	Ile	Gly	Thr	Val	Val	Ser	Cys	Thr	Ile	Ile	Ser
115															125
Leu	Gly	Ala	Ile	Gln	Phe	Phe	Lys	Lys	Leu	Asp	Ile	Gly	Thr	Phe	Asp
130															140
Leu	Gly	Asp	Phe	Leu	Ala	Ile	Gly	Ala	Ile	Phe	Ala	Ala	Thr	Asp	Ser
145															160
Val	Cys	Thr	Leu	Gln	Val	Leu	Asn	Gln	Asp	Glu	Thr	Pro	Leu	Leu	Tyr
165															175
Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr	Ser	Val	Val
180															190
Leu	Phe	Asn	Ala	Ile	Gln	Ser	Phe	Leu	Thr	His	Leu	Asn	His	Glu	

195	200	205
Ala Ala Phe Gln Phe Leu Gly Asn Phe Phe Tyr	Leu Phe Leu Leu Ser	
210	215	220
Thr Gly Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Tyr Val Ile Lys		
225	230	235
Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met		240
245	250	255
Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ala Leu		
260	265	270
Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr		
275	280	285
Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His Ala		
290	295	300
Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Ile Phe Leu Tyr Val		
305	310	315
Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Ser Asp Ser		
325	330	335
Pro Gly Thr Ser Val Ala Val Ser Ser Ile Leu Met Gly Leu Val Met		
340	345	350
Leu Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu		
355	360	365
Ala Lys Lys His Gln Ser Glu Lys Ile Ser Ile Lys Gln Gln Val Val		
370	375	380
Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala		
385	390	395
Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Glu Leu Arg Gly Asn Ala		
405	410	415
Ile Met Ile Thr Ser Thr Ile Thr Val Cys Leu Phe Ser Thr Met Val		
420	425	430
Phe Gly Met Leu Thr Lys Pro Leu Ile Arg Tyr Leu Met Pro His Gln		
435	440	445
Lys Ala Thr Thr Ser Thr Thr Ser Met Leu Ser Asp Asp Ser Thr Pro		
450	455	460
Lys Ser Ile His Ile Pro Leu Leu Asp Gly Glu Gln Leu Asp Ser Phe		
465	470	475
Glu Leu Pro Gly Ser His Gln Asp Val Pro Arg Pro Asn Ser Leu Arg		
485	490	495
Gly Phe Leu Met Arg Pro Thr Arg Thr Val His Tyr Tyr Trp Arg Gln		
500	505	510
Phe Asp Asp Ala Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Val		
515	520	525
Pro Phe Val Pro Gly Ser Pro Thr Glu Arg Ser Ser His Asp Leu Ser		
530	535	540
Lys Pro		
545		

<210> 14
<211> 529
<212> PRT
<213> Arabidopsis thaliana

<400> 14
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His Pro Gln Val Ile Pro Ile Ser Val Phe Ile Ala Ile Leu Cys Leu
20 25 30

Cys Leu Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp Val Asn Glu
 35 40 45
 Ser Ile Thr Ala Ile Leu Val Gly Ala Ala Ser Gly Thr Val Ile Leu
 50 55 60
 Leu Ile Ser Lys Gly Lys Ser Ser His Ile Leu Val Phe Asp Glu Glu
 65 70 75 80
 Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe
 85 90 95
 Gln Val Lys Lys Lys Phe Phe His Asn Phe Leu Thr Ile Met Ser
 100 105 110
 Phe Gly Val Ile Gly Val Phe Ile Ser Thr Val Ile Ile Ser Phe Gly
 115 120 125
 Thr Trp Trp Leu Phe Pro Lys Leu Gly Phe Lys Gly Leu Ser Ala Arg
 130 135 140
 Asp Tyr Leu Ala Ile Gly Thr Ile Phe Ser Ser Thr Asp Thr Val Cys
 145 150 155 160
 Thr Leu Gln Ile Leu His Gln Asp Glu Thr Pro Leu Leu Tyr Ser Leu
 165 170 175
 Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Leu Phe
 180 185 190
 Asn Ala Val Gln Lys Ile Gln Phe Glu Ser Leu Thr Gly Trp Thr Ala
 195 200 205
 Leu Gln Val Phe Gly Asn Phe Leu Tyr Leu Phe Ser Thr Ser Thr Leu
 210 215 220
 Leu Gly Ile Gly Val Gly Leu Ile Thr Ser Phe Val Leu Lys Thr Leu
 225 230 235 240
 Tyr Phe Gly Arg His Ser Thr Thr Arg Glu Leu Ala Ile Met Val Leu
 245 250 255
 Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ser Leu Ser Gly
 260 265 270
 Ile Leu Thr Val Phe Phe Cys Gly Val Leu Met Ser His Tyr Ala Ser
 275 280 285
 Tyr Asn Val Thr Glu Ser Ser Arg Ile Thr Ser Arg His Val Phe Ala
 290 295 300
 Met Leu Ser Phe Ile Ala Glu Thr Phe Ile Phe Leu Tyr Val Gly Thr
 305 310 315 320
 Asp Ala Leu Asp Phe Thr Lys Trp Lys Thr Ser Ser Leu Ser Phe Gly
 325 330 335
 Gly Thr Leu Gly Val Ser Gly Val Ile Thr Ala Leu Val Leu Leu Gly
 340 345 350
 Arg Ala Ala Phe Val Phe Pro Leu Ser Val Leu Thr Asn Phe Met Asn
 355 360 365
 Arg His Thr Glu Arg Asn Glu Ser Ile Thr Phe Lys His Gln Val Ile
 370 375 380
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala
 385 390 395 400
 Phe Lys Gln Phe Thr Tyr Ser Gly Val Thr Leu Asp Pro Val Asn Ala
 405 410 415
 Ala Met Val Thr Asn Thr Thr Ile Val Val Leu Phe Thr Thr Leu Val
 420 425 430
 Phe Gly Phe Leu Thr Lys Pro Leu Val Asn Tyr Leu Leu Pro Gln Asp
 435 440 445
 Ala Ser His Asn Thr Gly Asn Arg Gly Lys Arg Thr Glu Pro Gly Ser
 450 455 460
 Pro Lys Glu Asp Ala Thr Leu Pro Leu Leu Ser Phe Asp Glu Ser Ala
 465 470 475 480
 Ser Thr Asn Phe Asn Arg Ala Lys Asp Ser Ile Ser Leu Leu Met Glu

	485	490	495
Gln Pro Val Tyr Thr Ile His Arg Tyr Trp Arg Lys Phe Asp Asp Thr			
500	505	510	
Tyr Met Arg Pro Ile Phe Gly Gly Pro Arg Arg Glu Asn Gln Pro Glu			
515	520	525	
Cys			

<210> 15
<211> 552
<212> PRT
<213> Arabidopsis thaliana

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Met Val Ile Gly Leu Ser Thr Met Leu Glu Lys Thr Glu Ala Leu Phe			
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Ala Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala Leu			
20	25	30	
Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Thr Arg Trp			
35	40	45	
Met Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Ser Cys Thr Gly Ile			
50	55	60	
Val Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser Arg Ile Leu Val Phe			
65	70	75	80
Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn			
85	90	95	
Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Met Thr			
100	105	110	
Ile Met Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Phe Val Ile Ile			
115	120	125	
Ser Phe Gly Ala Lys His Leu Phe Glu Lys Met Asn Ile Gly Asp Leu			
130	135	140	
Thr Ile Ala Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp			
145	150	155	160
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu			
165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val			
180	185	190	
Val Leu Phe Asn Ala Ile Gln Arg Phe Asp Leu Thr Asn Ile Asn Ser			
195	200	205	
Ala Ile Ala Leu Glu Phe Ala Gly Asn Phe Phe Tyr Leu Phe Ile Leu			
210	215	220	
Ser Thr Ala Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Phe Val Ile			
225	230	235	240
Lys Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu			
245	250	255	
Met Met Leu Leu Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe His			
260	265	270	
Leu Ser Ser Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His			
275	280	285	
Tyr Thr Trp His Asn Val Thr Asp Lys Ser Lys Val Thr Thr Lys His			
290	295	300	
Thr Phe Ala Ala Met Ser Phe Leu Ala Glu Ile Phe Ile Phe Leu Tyr			
305	310	315	320
Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Asp Val Val Arg Asn			
325	330	335	

Ser Pro Gly Gln Ser Ile Gly Val Ser Ser Ile Leu Leu Gly Leu Ile
 340 345 350
 Leu Leu Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Thr Lys Ser Ser Pro Asp Glu Lys Ile Asp Leu Lys Lys Gln Val
 370 375 380
 Thr Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu
 385 390 395 400
 Ala Tyr Asn Gln Phe Thr Thr Ser Gly His Thr Lys Val Leu Gly Asn
 405 410 415
 Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Val
 420 425 430
 Val Phe Gly Leu Leu Thr Lys Pro Leu Val Lys His Leu Gln Pro Ser
 435 440 445
 Ser Lys Gln Ser Ser Thr Thr Ala Leu Gln Ile Thr Leu Arg Ser Ser
 450 455 460
 Phe His Asp Pro Ile Leu His Glu Pro Leu Leu Ser Thr Gln Gly Gln
 465 470 475 480
 Ser Glu Tyr Asp Pro Glu Gln His Val Ser Phe Arg Met Phe Trp Lys
 485 490 495
 Ser Pro Ser Arg Ala Ile His His Tyr Trp Arg Lys Phe Asp Asn Ala
 500 505 510
 Val Met Arg Arg Ile Phe Gly Gly Arg Gly Val Ser Pro Val Val Pro
 515 520 525
 Gly Ser Pro Ile Glu Asn Ser Val Pro Gln Trp Ser Glu Glu Val Glu
 530 535 540
 Asn Lys Glu Gln Asn Gly Glu Pro
 545 550

<210> 16
 <211> 487
 <212> PRT
 <213> Arabidopsis thaliana

<400> 16
 Met Glu Glu Val Met Ile Ser Pro Val Glu His Asp Pro Gln Gly Gln
 1 5 10 15
 Val Lys Gln Gln Gln Ala Ala Gly Val Gly Ile Leu Leu Gln Ile Met
 20 25 30
 Met Leu Val Leu Ser Phe Val Leu Gly His Val Leu Arg Arg His Arg
 35 40 45
 Phe His Tyr Leu Pro Glu Ala Ser Gly Leu Ile Val Gly Ile Leu Ala
 50 55 60
 Asn Ile Ser Asp Thr Glu Thr Ser Ile Arg Phe Cys Pro Pro Pro Ser
 65 70 75 80
 Ile Pro Glu Phe Ser Leu Leu Ser Phe Pro Arg Ser Leu Lys Pro Phe
 85 90 95
 Phe Ser Asn Phe Gly Ala Ile Val Thr Phe Ala Ile Ile Gly Thr Phe
 100 105 110
 Val Ala Ser Val Val Thr Gly Gly Leu Val Tyr Leu Gly Gly Ser Met
 115 120 125
 Tyr Leu Met Tyr Lys Leu Pro Phe Val Glu Cys Leu Met Phe Gly Ala
 130 135 140
 Leu Ile Ser Ala Thr Asp Pro Val Thr Val Leu Ser Ile Phe Gln Asp
 145 150 155 160
 Val Gly Thr Asp Val Asn Leu Tyr Ala Leu Val Phe Gly Glu Ser Val

	165	170	175
Leu Asn Asp Ala Val Ser Phe Tyr Tyr	180	185	190
Leu Leu Arg Tyr Trp Ala Leu			
Pro Phe Lys Phe Phe Glu Thr Phe Ala Gly Ser Met Ser Ala Glu His	195	200	205
Leu Phe Lys Tyr Ala Gly Leu Asp Thr Glu Asn Leu Gln Asn Leu Glu	210	215	220
Cys Cys Leu Phe Val Leu Phe Pro Tyr Phe Ser Tyr Met Leu Ala Glu	225	230	235
Gly Val Gly Leu Ser Gly Ile Val Ser Ile Leu Phe Thr Gly Ile Val	245	250	255
Met Lys Arg Tyr Thr Phe Ser Asn Leu Ser Glu Ala Ser Gln Ser Phe	260	265	270
Val Ser Ser Phe Phe His Leu Ile Ser Ser Leu Ala Glu Thr Phe Thr	275	280	285
Phe Ile Tyr Met Gly Phe Asp Ile Ala Met Glu Gln His Ser Trp Ser	290	295	300
His Val Gly Phe Ile Leu Phe Ser Ile Val Ser Ser Phe Thr Asp Arg	305	310	315
Gln Ala Val Asn Val Phe Gly Cys Ala Tyr Leu Val Asn Leu Phe Arg	325	330	335
Gln Glu Asn Gln Lys Ile Pro Met Lys His Gln Lys Ala Leu Trp Tyr	340	345	350
Ser Gly Leu Arg Gly Ala Met Ala Phe Ala Leu Ala Leu Gln Ser Leu	355	360	365
His Asp Leu Pro Glu Gly His Gly Gln Ile Ile Phe Thr Ala Thr Thr	370	375	380
Thr Ile Val Val Val Thr Val Leu Leu Ile Gly Gly Ser Thr Gly Lys	385	390	395
Met Leu Glu Ala Leu Glu Val Val Gly Asp Asp Leu Asp Asp Ser Met	405	410	415
Ser Glu Gly Phe Glu Glu Ser Asp His Gln Tyr Val Pro Pro Pro Phe	420	425	430
Ser Ile Gly Ala Ser Ser Asp Glu Asp Thr Ser Ser Ser Gly Ser Arg	435	440	445
Phe Lys Met Lys Leu Lys Glu Phe His Lys Thr Thr Ser Phe Thr	450	455	460
Ala Leu Asp Lys Asn Phe Leu Thr Pro Phe Phe Thr Thr Asn Ser Gly	465	470	475
Asp Gly Asp Gly Asp Gly Glu	485		

<210> 17
<211> 531
<212> PRT
<213> Arabidopsis thaliana

<400> 17

Met Ser Ser Glu Leu Gln Ile Ser Pro Ala Ile His Asp Pro Gln Gly	1	5	10	15
Gln Glu Lys Gln Gln Gln Ala Ala Gly Val Gly Ile Leu Leu Gln Ile	20	25	30	
Met Met Leu Val Leu Ser Phe Val Leu Gly His Val Leu Arg Arg His	35	40	45	
Lys Phe Tyr Tyr Leu Pro Glu Ala Ser Ala Ser Leu Leu Ile Gly Leu	50	55	60	

Ile Val Gly Gly Leu Ala Asn Ile Ser Asn Thr Glu Thr Ser Ile Arg
 65 70 75 80
 Phe Val Glu Leu Phe Leu Ile Ser Phe Phe Arg His Gly Ser Ile Ser
 85 90 95
 Thr Met Ser Ser Ser Phe Cys Phe Cys Cys Leu Pro Ser Tyr Tyr Ile
 100 105 110
 Leu Lys Ile Glu Tyr Leu Gly Gly Val Met Phe Leu Met Tyr Arg Leu
 115 120 125
 Pro Phe Val Glu Cys Leu Met Phe Gly Ser Leu Ile Ser Ala Thr Asp
 130 135 140
 Pro Val Thr Val Leu Ser Ile Phe Gln Glu Leu Gly Ser Asp Val Asn
 145 150 155 160
 Leu Tyr Ala Leu Val Phe Gly Glu Ser Val Leu Asn Asp Ala Asp Glu
 165 170 175
 Ile Val Thr Leu Leu Ile Arg Ser Phe Ser Phe Leu Cys Cys Phe Trp
 180 185 190
 Gln Met Ala Ile Ser Leu Tyr Arg Thr Met Ser Leu Val Arg Ser His
 195 200 205
 Ser Ser Gly Gln Asn Phe Phe Met Val Ile Val Arg Phe Leu Glu Thr
 210 215 220
 Phe Val Gly Ser Met Ser Ala Ala Met Lys Tyr Phe Ile Leu Met Tyr
 225 230 235 240
 Ser Leu Leu Leu Ser Val Tyr Arg Thr Trp Ser Ala Val Ser Ser Tyr
 245 250 255
 Phe Phe His Ile Ser Arg Asn Lys Thr Leu Leu Phe Tyr Thr Ser Tyr
 260 265 270
 Val Ser Ile Tyr Phe Thr Leu Ile Glu Ile Val Gln Phe Val Met Lys
 275 280 285
 His Tyr Thr Tyr Ser Asn Leu Ser Ala Asn Ser Gln Arg Phe Val Ser
 290 295 300
 Ala Phe Phe His Leu Ile Ser Ser Leu Ala Glu Thr Phe Val Phe Ile
 305 310 315 320
 Tyr Met Gly Phe Asp Ile Ala Met Glu Lys His Ser Trp Ala Ala Asn
 325 330 335
 Val Phe Gly Cys Gly Tyr Leu Val Asn Leu Ala Arg Pro Ala His Arg
 340 345 350
 Lys Ile Pro Met Thr His Gln Lys Ala Leu Trp Tyr Ser Gly Lys Ile
 355 360 365
 Leu Leu Cys Val Pro Leu Ser Ser Tyr Cys Phe Tyr Ser Ser Val Ile
 370 375 380
 Asn Thr Lys Ile Cys Gly Phe Cys Ile Gly Leu Arg Gly Ala Met Ala
 385 390 395 400
 Phe Ala Leu Ala Leu Gln Ser Val His Asp Leu Pro Glu Gly His Gly
 405 410 415
 Gln Thr Ile Phe Thr Ala Thr Thr Ala Ile Val Val Leu Thr Val Leu
 420 425 430
 Leu Ile Gly Gly Ser Thr Gly Thr Met Leu Glu Ala Leu Glu Val Val
 435 440 445
 Gly Asp Ser His Asp Thr Ser Leu Gly Asp Gly Phe Glu Val Val Asn
 450 455 460
 Ser Arg Tyr Met Thr Ser Tyr Asp Asp Glu Asp Thr Pro Pro Gly Ser
 465 470 475 480
 Gly Phe Arg Thr Lys Leu Arg Glu Phe His Lys Ser Ala Ala Ser Phe
 485 490 495
 Thr Glu Leu Asp Arg Asn Tyr Leu Thr Pro Phe Phe Thr Ser Asn Asn
 500 505 510
 Gly Asp Tyr Asp Asp Glu Gly Asn Met Glu Gln His His Gly Asn Asn

515	520	525
Ile Ile Leu		
530		
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<211> 697		
<212> PRT		
<213> Arabidopsis thaliana		
<400> 18		
Met Thr Ser Ile Ile Gly Ala Ala Leu Pro Tyr Lys Ser Pro Glu Lys		
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Ala Ile Ala Ser Ser Ser Tyr Ser Ala Glu Asn Asp Ser Ser Pro Val		
20	25	30
Asp Ala Val Ile Phe Ala Gly Thr Ser Leu Val Leu Gly Thr Ala Cys		
35	40	45
Arg Tyr Leu Phe Asn Gly Thr Arg Val Pro Tyr Thr Val Val Leu Leu		
50	55	60
Val Ile Gly Ile Phe Leu Gly Ser Leu Glu Tyr Gly Thr Lys His Asn		
65	70	75
Leu Gly Lys Leu Gly His Gly Ile Arg Ile Trp Asn Gly Ile Asn Pro		
85	90	95
Asp Leu Leu Leu Ala Val Phe Leu Pro Val Leu Leu Phe Glu Ser Ser		
100	105	110
Phe Ser Met Asp Val His Gln Ile Lys Arg Cys Met Gly Gln Met Val		
115	120	125
Leu Leu Ala Gly Pro Gly Val Leu Ile Ser Thr Phe Cys Leu Gly Ala		
130	135	140
Leu Ile Lys Leu Thr Phe Pro Tyr Asn Trp Asp Trp Lys Thr Ser Leu		
145	150	155
Leu Leu Gly Gly Leu Leu Gly Ala Thr Asp Pro Val Ala Val Val Ala		
165	170	175
Leu Leu Lys Glu Leu Gly Ala Ser Lys Lys Met Thr Thr Leu Ile Asp		
180	185	190
Gly Glu Ser Leu Met Asn Asp Gly Val Ser Val Val Val Phe Gln Leu		
195	200	205
Phe Phe Lys Met Val Met Gly His Asn Ser Asp Trp Gly Ser Ile Ile		
210	215	220
Lys Phe Leu Val Gln Asn Ser Phe Gly Ala Val Gly Ile Gly Leu Ala		
225	230	235
Phe Gly Ile Ala Ser Val Phe Trp Leu Lys Phe Ile Phe Asn Asp Thr		
245	250	255
Val Ala Gln Ile Thr Val Thr Leu Ser Ala Ser Tyr Phe Ala Tyr Tyr		
260	265	270
Thr Ala Gln Glu Trp Ala Gly Val Ser Gly Ile Leu Thr Val Met Ile		
275	280	285
Leu Gly Met Phe Phe Ala Ala Phe Ala Arg Thr Ala Phe Lys Gly Asp		
290	295	300
Ser His Gln Ser Leu His His Phe Trp Tyr Phe Thr Thr Gln Glu Met		
305	310	315
Ala Ala Tyr Ile Ala Asn Thr Leu Val Phe Met Leu Ser Gly Val Ile		
325	330	335
Ile Ala Glu Ser Val Leu Ser Gly Gln Thr Ile Ser Tyr Lys Ala Ile		
340	345	350
Lys Trp Lys Phe Ile Ser Gln Phe Arg Tyr Gly Asn Lys Ala Val Leu		
355	360	365

Gln Phe Leu Phe Leu Thr Gly Gly Ile Val Phe Leu Thr Leu Val Val
 370 375 380
 Asn Gly Ser Thr Thr Gln Leu Leu Leu His Leu Leu Arg Met Asp Thr
 385 390 395 400
 Leu Thr Ala Thr Lys Lys Arg Ile Leu Glu Tyr Thr Lys Phe Glu Met
 405 410 415
 Met Lys Thr Ala Leu Lys Ala Phe Glu Asn Leu Gly Asp Asp Glu Glu
 420 425 430
 Leu Gly Ser Ala Asp Trp Pro Thr Val Ile Arg His Ile Ser Ser Leu
 435 440 445
 Lys Asp Leu Glu Gly Arg Gln Val Asn Pro His Asp Gly Tyr Glu Ala
 450 455 460
 Gly Ser Leu Asp Pro Thr Asn Ile Met Asp Ile Arg Val Gln Ala Ala
 465 470 475 480
 Tyr Trp Glu Met Leu Asp Asp Gly Arg Ile Thr Gln Cys Thr Ala Asn
 485 490 495
 Val Leu Met Gln Ser Val Asp Glu Ala Leu Asp Leu Val Ser Thr Ser
 500 505 510
 Ser Leu Ser Asp Trp Arg Gly Leu Glu Pro Arg Val His Phe Pro Asn
 515 520 525
 Tyr Tyr Lys Phe Leu Gln Ser Lys Ile Ile Pro His Lys Leu Val Thr
 530 535 540
 His Leu Ile Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ser Ala
 545 550 555 560
 Phe Leu Arg Ala His Arg Ile Ala Arg Gln Gln Leu His Ile Phe Leu
 565 570 575
 Gly Asn Ser Asn Ile Ala Ser Thr Val Ile Asn Glu Ser Glu Val Glu
 580 585 590
 Gly Glu Glu Ala Lys Gln Phe Leu Glu Asp Val Arg Asp Ser Phe Pro
 595 600 605
 Gln Val Leu Ser Val Leu Lys Thr Arg Gln Val Thr His Tyr Val Leu
 610 615 620
 Asn His Leu Asn Gly Tyr Ile Lys Asn Leu Glu Lys Val Gly Leu Leu
 625 630 635 640
 Glu Gly Lys Glu Val Ser His Leu His Asp Val Val Gln Ser Asp Leu
 645 650 655
 Lys Lys Leu Leu Arg His Pro Pro Ser Leu Lys Leu Pro Asn Val Asp
 660 665 670
 Asp Leu Ile Thr Ser Asn Pro Leu Leu Lys Asp Arg Ser Ser Phe Arg
 675 680 685
 Ser Leu Ala Ile Gly Glu Thr Asp Ala
 690 695

<210> 19
 <211> 697
 <212> PRT
 <213> Arabidopsis thaliana

<400> 19
 Met Thr Ser Ile Ile Gly Ala Ala Leu Pro Tyr Lys Ser Pro Glu Lys
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 Ala Ile Ala Ser Ser Ser Tyr Ser Ala Glu Asn Asp Ser Ser Pro Val
 20 25 30
 Asp Ala Val Ile Phe Ala Gly Thr Ser Leu Val Leu Gly Thr Ala Cys
 35 40 45
 Arg Tyr Leu Phe Asn Gly Thr Arg Val Pro Tyr Thr Val Val Leu Leu

50	55	60
Val Ile Gly Ile Phe Leu Gly Ser Leu Glu Tyr	Gly Thr Lys His Asn	
65	70	75
Leu Gly Lys Leu Gly His Gly Ile Arg Ile Trp Asn Gly Ile Asn Pro		80
85	90	95
Asp Leu Leu Leu Ala Val Phe Leu Pro Val Leu Leu Phe Glu Ser Ser		
100	105	110
Phe Ser Met Asp Val His Gln Ile Lys Arg Cys Met Gly Gln Met Val		
115	120	125
Leu Leu Ala Gly Pro Gly Val Leu Ile Ser Thr Phe Cys Leu Gly Ala		
130	135	140
Leu Ile Lys Leu Thr Phe Pro Tyr Asn Trp Asp Trp Lys Thr Ser Leu		
145	150	155
Leu Leu Gly Gly Leu Leu Gly Ala Thr Asp Pro Val Ala Val Val Ala		
165	170	175
Leu Leu Lys Glu Leu Gly Ala Ser Lys Lys Met Thr Thr Leu Ile Asp		
180	185	190
Gly Glu Ser Leu Met Asn Asp Gly Val Ser Val Val Val Phe Gln Leu		
195	200	205
Phe Phe Lys Met Val Met Gly His Asn Ser Asp Trp Gly Ser Ile Ile		
210	215	220
Lys Phe Leu Val Gln Asn Ser Phe Gly Ala Val Gly Ile Gly Leu Ala		
225	230	235
Phe Gly Ile Ala Ser Val Phe Trp Leu Lys Phe Ile Phe Asn Asp Thr		
245	250	255
Val Ala Gln Ile Thr Val Thr Leu Ser Ala Ser Tyr Phe Ala Tyr Tyr		
260	265	270
Thr Ala Gln Glu Trp Ala Gly Val Ser Gly Ile Leu Thr Val Met Ile		
275	280	285
Leu Gly Met Phe Phe Ala Ala Phe Ala Arg Thr Ala Phe Lys Gly Asp		
290	295	300
Ser His Gln Ser Leu His His Phe Trp Tyr Phe Thr Thr Gln Glu Met		
305	310	315
Ala Ala Tyr Ile Ala Asn Thr Leu Val Phe Met Leu Ser Gly Val Ile		
325	330	335
Ile Ala Glu Ser Val Leu Ser Gly Gln Thr Ile Ser Tyr Lys Ala Ile		
340	345	350
Lys Trp Lys Phe Ile Ser Gln Phe Arg Tyr Gly Asn Lys Ala Val Leu		
355	360	365
Gln Phe Leu Phe Leu Thr Gly Gly Ile Val Phe Leu Thr Leu Val Val		
370	375	380
Asn Gly Ser Thr Thr Gln Leu Leu Leu His Leu Leu Arg Met Asp Thr		
385	390	395
Leu Thr Ala Thr Lys Lys Arg Ile Leu Glu Tyr Thr Lys Phe Glu Met		
405	410	415
Met Lys Thr Ala Leu Lys Ala Phe Glu Asn Leu Gly Asp Asp Glu Glu		
420	425	430
Leu Gly Ser Ala Asp Trp Pro Thr Val Ile Arg His Ile Ser Ser Leu		
435	440	445
Lys Asp Leu Glu Gly Arg Gln Val Asn Pro His Asp Gly Tyr Glu Ala		
450	455	460
Gly Ser Leu Asp Pro Thr Asn Ile Met Asp Ile Arg Val Gln Ala Ala		
465	470	475
Tyr Trp Glu Met Leu Asp Asp Gly Arg Ile Thr Gln Cys Thr Ala Asn		
485	490	495
Val Leu Met Gln Ser Val Asp Glu Ala Leu Asp Leu Val Ser Thr Ser		
500	505	510

Ser Leu Ser Asp Trp Arg Gly Leu Glu Pro Arg Val His Phe Pro Asn
 515 520 525
 Tyr Tyr Lys Phe Leu Gln Ser Lys Ile Ile Pro His Lys Leu Val Thr
 530 535 540
 His Leu Ile Val Glu Arg Leu Glu Ser Ala Cys Tyr Ile Ser Ser Ala
 545 550 555 560
 Phe Leu Arg Ala His Arg Ile Ala Arg Gln Gln Leu His Ile Phe Leu
 565 570 575
 Gly Asn Ser Asn Ile Ala Ser Thr Val Ile Asn Glu Ser Glu Val Glu
 580 585 590
 Gly Glu Ala Lys Gln Phe Leu Glu Asp Val Arg Asp Ser Phe Pro
 595 600 605
 Gln Val Leu Ser Val Leu Lys Thr Arg Gln Val Thr His Tyr Val Leu
 610 615 620
 Asn His Leu Asn Gly Tyr Ile Lys Asn Leu Glu Lys Val Gly Leu Leu
 625 630 635 640
 Glu Gly Lys Glu Val Ser His Leu His Asp Val Val Gln Ser Asp Leu
 645 650 655
 Lys Lys Leu Leu Arg His Pro Pro Ser Leu Lys Leu Pro Asn Val Asp
 660 665 670
 Asp Leu Ile Thr Ser Asn Pro Leu Leu Lys Asp Arg Ser Ser Phe Arg
 675 680 685
 Ser Leu Ala Ile Gly Glu Thr Asp Ala
 690 695

<210> 20
 <211> 534
 <212> PRT
 <213> Lycopersicon esculentum

<400> 20
 Met Gly Leu Asp Ala Val Ala Arg Leu Gly Val Ser Ile Leu Ser Asp
 1 5 10 15
 Gly Asp Gln Val Ser Val Asp Ser Ile Thr Leu Phe Val Ala Leu Leu
 20 25 30
 Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Ser Arg Trp Ile
 35 40 45
 Asn Asp Ser Ile Thr Thr Leu Val Ile Gly Leu Ser Thr Gly Gly Ile
 50 55 60
 Ile Leu Leu Thr Thr Lys Gly Lys Ser Ser His Leu Leu Glu Phe Asp
 65 70 75 80
 Glu Gln Leu Phe Phe Ile Tyr Val Leu Pro Pro Ile Ile Phe Asn Ala
 85 90 95
 Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile
 100 105 110
 Met Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Phe Ser Ile Ile Ser
 115 120 125
 Phe Gly Ala Lys Glu Leu Leu Gly Lys Leu Asp Ile Gly Phe Leu Glu
 130 135 140
 Leu Arg Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser
 145 150 155 160
 Val Cys Thr Leu Gln Ala Leu Asn Gln Asp Glu Thr Pro Arg Leu Tyr
 165 170 175
 Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val
 180 185 190
 Leu Phe Asn Ala Ile Gln Lys Leu Asp Leu Ser His Ile Asn Ser Arg

195	200	205
Ala Ala Leu Val Phe Thr Gly Asn Phe Leu Tyr	Leu Phe Leu Ala Ser	
210	215	220
Thr Phe Leu Gly Val Leu Ile Gly Leu Leu Ser	Ala Tyr Leu Ile Lys	
225	230	235
Lys Ile Tyr Leu Gly Arg His Ser Thr Asp Arg Glu	Val Ala Leu Met	
245	250	255
Ile Leu Met Ala Tyr Leu Ser Tyr Val Met Ala Glu	Leu Phe Asp Leu	
260	265	270
Ser Gly Ile Leu Thr Val Phe Ile Cys Gly Ile Val	Met Ser His Tyr	
275	280	285
Thr Trp His Asn Val Thr Phe Asn Ser Lys Val	Thr Thr Arg His Ala	
290	295	300
Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe	Ile Phe Leu Tyr Val	
305	310	315
Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg	Phe Val Lys Asp Ser	
325	330	335
Pro Gly Lys Ser Val Gly Val Ser Ala Ala Leu	Leu Gly Leu Val Leu	
340	345	350
Val Gly Arg Ala Cys Phe Val Phe Pro Leu Ser	Leu Phe Ser Asn Cys	
355	360	365
Leu Lys Arg Ser Glu His Asp Lys Phe Gly Leu	Lys Leu Gln Val Thr	
370	375	380
Ile Trp Trp Ala Gly Leu Met Arg Gly Ser Val	Ser Met Ala Leu Ala	
385	390	395
Tyr Asn Gln Phe Thr Arg Phe Gly His Thr Gln	Gln Pro Gly Asn Ala	
405	410	415
Val Met Ile Thr Ser Thr Ile Thr Ile Val Leu	Phe Ser Thr Val Val	
420	425	430
Phe Gly Leu Ile Thr Lys Pro Leu Val Arg Phe	Leu Leu Pro Ser Ser	
435	440	445
Gln Gly Phe Asn Asn Leu Ile Ser Ser Glu Gln	Ser Phe Ala Arg Pro	
450	455	460
Leu Leu Thr Asn Glu Gln Glu Leu Glu Leu	Glu Met Gly Asn Val Asp	
465	470	475
Pro Val Arg Pro Ser Gly Leu Ser Ile Leu	Leu Lys Glu Pro Ser Tyr	
485	490	495
Thr Ile His Asn His Trp Arg Arg Phe Asp Asp	Ala Phe Met Arg Pro	
500	505	510
Leu Phe Gly Gly Arg Gly Phe Val Pro Asp Ala	Pro Glu Leu Ser Lys	
515	520	525
Gly Gly Cys Asp Gln Tyr		
530		

<210> 21
 <211> 531
 <212> PRT
 <213> Lycopersicon esculentum

<400> 21
 Met Glu Asp His Leu Gln Ile Ser Pro Ala Gly Ala Lys Ala Ile Pro
 1 5 10 15
 Gly Lys Glu Gln Gln Ala Ala Gly Tyr Gly Ile Leu Leu Gln Ile Met
 20 25 30
 Met Leu Val Leu Ser Phe Val Ile Gly His Val Leu Arg Arg Arg His
 35 40 45

Phe Tyr Tyr Ile Pro Glu Ala Ser Ala Ser Leu Leu Ile Gly Leu Ile
 50 55 60
 Val Gly Gly Leu Ala Asn Val Ser Asp Thr Glu Thr Ser Ile Arg Ala
 65 70 75 80
 Trp Phe Asn Phe His Glu Glu Phe Phe Phe Leu Phe Leu Leu Pro Pro
 85 90 95
 Ile Ile Phe Gln Ser Gly Phe Ser Leu Ser Pro Lys Pro Phe Phe Ser
 100 105 110
 Asn Phe Gly Ala Ile Ile Thr Phe Ala Ile Leu Gly Thr Phe Ile Ala
 115 120 125
 Ser Phe Val Thr Gly Ile Leu Val Tyr Leu Gly Gly Val Thr Tyr Leu
 130 135 140
 Met Tyr Arg Leu Pro Phe Val Glu Cys Leu Met Phe Gly Ala Leu Ile
 145 150 155 160
 Ser Ala Thr Asp Pro Val Thr Val Leu Ser Ile Phe Gln Glu Leu Gly
 165 170 175
 Thr Asp Val Asn Leu Tyr Ala Leu Val Phe Gly Glu Ser Val Leu Asn
 180 185 190
 Asp Ala Met Ala Ile Ser Leu Tyr Arg Thr Met Ser Leu Val Arg Ser
 195 200 205
 His Met Ser Thr Asp Gln Asn Tyr Phe Met Ile Thr Ile Arg Phe Val
 210 215 220
 Glu Thr Phe Met Gly Ser Leu Ser Ala Gly Val Gly Val Gly Phe Val
 225 230 235 240
 Ser Ala Leu Leu Phe Lys Tyr Ala Gly Leu Asp Ile Asp Asn Leu Gln
 245 250 255
 Asn Leu Glu Ser Cys Leu Phe Val Leu Phe Pro Tyr Phe Ser Tyr Met
 260 265 270
 Leu Ala Glu Gly Leu Gly Leu Ser Gly Ile Val Ser Ile Leu Phe Thr
 275 280 285
 Gly Val Val Met Lys Arg Tyr Thr Tyr Pro Asn Leu Ser Glu Ser Ser
 290 295 300
 Gln Arg Phe Val Ser Ala Phe Phe His Leu Ile Ser Ser Leu Ala Glu
 305 310 315 320
 Thr Phe Val Phe Ile Tyr Met Gly Phe Asp Ile Ala Met Glu Lys His
 325 330 335
 Ser Trp Ser His Val Gly Phe Ile Phe Phe Ser Ile Leu Phe Ile Val
 340 345 350
 Ile Ala Arg Ala Ala Asn Val Phe Gly Cys Ala Tyr Leu Val Asn Leu
 355 360 365
 Val Arg Pro Pro His Gln Lys Ile Pro Ala Lys His Gln Lys Ala Leu
 370 375 380
 Trp Tyr Ser Gly Leu Arg Gly Ala Met Ala Phe Ala Leu Ala Leu Gln
 385 390 395 400
 Pro Val His Asp Leu Pro Glu Gly His Gly Gln Ala Ile Phe Thr Ala
 405 410 415
 Thr Thr Ala Ile Val Val Leu Thr Val Leu Ile Ile Gly Gly Ser Ala
 420 425 430
 Gly Thr Met Leu Glu Ala Leu Glu Val Val Gly Asp Gly Gln Ser Gly
 435 440 445
 Ser Met Asp Glu Thr Phe Glu Gly Asn Asn Gly Tyr Ile Ala Pro Ser
 450 455 460
 Tyr Arg Asp Glu Ser Tyr Asp Gly Glu Pro Ser Ser Gly Asn Arg Phe
 465 470 475 480
 Arg Met Lys Leu Lys Glu Phe His Lys Ser Thr Thr Ser Phe Ser Ala
 485 490 495
 Leu Asp Lys Asn Tyr Leu Thr Pro Phe Phe Thr Thr Gln Gly Gly Asp

	500	505	510
Glu Asp Glu Asp Glu Pro Ile Met His Ser Ser Arg Arg Ala Gly Tyr			
515	520	525	
Asp Gly His			
530			

<210> 22
<211> 535
<212> PRT
<213> Oryza sativa

<400> 22			
Met Gly Met Glu Val Ala Ala Ala Arg Leu Gly Ala Leu Tyr Thr Thr			
1	5	10	15
Ser Asp Tyr Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala Leu Leu			
20	25	30	
Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Val			
35	40	45	
Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val			
50	55	60	
Ile Leu Leu Met Thr Lys Gly Lys Ser Ser His Leu Phe Val Phe Ser			
65	70	75	80
Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala			
85	90	95	
Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr Ile			
100	105	110	
Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile Ser			
115	120	125	
Ile Ala Ala Ile Ala Ile Phe Ser Arg Met Asn Ile Gly Thr Leu Asp			
130	135	140	
Val Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser			
145	150	155	160
Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Phe Leu Tyr			
165	170	175	
Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Ile Val			
180	185	190	
Leu Phe Asn Ala Leu Gln Asn Phe Asp Leu Val His Ile Asp Ala Ala			
195	200	205	
Val Val Leu Lys Phe Leu Gly Asn Phe Phe Tyr Leu Phe Leu Ser Ser			
210	215	220	
Thr Phe Leu Gly Val Phe Ala Gly Leu Leu Ser Ala Tyr Ile Ile Lys			
225	230	235	240
Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met			
245	250	255	
Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Leu Asp Leu			
260	265	270	
Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr			
275	280	285	
Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His Ala			
290	295	300	
Phe Ala Thr Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe Leu Tyr Val			
305	310	315	320
Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Glu Phe Ala Ser Asp Arg			
325	330	335	
Pro Gly Lys Ser Ile Gly Ile Ser Ser Ile Leu Leu Gly Leu Val Leu			
340	345	350	

Ile Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu
 355 360 365
 Thr Lys Lys Ala Pro Asn Glu Lys Ile Thr Trp Arg Gln Gln Val Val
 370 375 380
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala
 385 390 395 400
 Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Gln Leu His Gly Asn Ala
 405 410 415
 Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Met Val
 420 425 430
 Phe Gly Met Met Thr Lys Pro Leu Ile Arg Leu Leu Pro Ala Ser
 435 440 445
 Gly His Pro Val Thr Ser Glu Pro Ser Ser Pro Lys Ser Leu His Ser
 450 455 460
 Pro Leu Leu Thr Ser Met Gln Gly Ser Asp Leu Glu Ser Thr Thr Asn
 465 470 475 480
 Ile Val Arg Pro Ser Ser Leu Arg Met Leu Leu Thr Lys Pro Thr His
 485 490 495
 Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu Met Arg Pro
 500 505 510
 Met Phe Gly Gly Arg Gly Phe Val Pro Phe Ser Pro Gly Ser Pro Thr
 515 520 525
 Glu Gln Ser His Gly Gly Arg
 530 535

<210> 23
 <211> 553
 <212> PRT
 <213> Nierembergia caerulea

<400> 23

Met Ala Phe Asp Phe Gly Thr Leu Leu Gly Lys Met Asn Asn Leu Thr
 1 5 10 15
 Thr Ser Asp His Gln Ser Val Val Ser Val Asn Leu Phe Val Ala Leu
 20 25 30
 Ile Cys Ala Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp
 35 40 45
 Met Asn Glu Ser Ile Thr Ala Leu Val Ile Gly Ser Cys Thr Gly Val
 50 55 60
 Ile Ile Leu Leu Ile Ser Gly Gly Lys Asn Ser His Ile Leu Val Phe
 65 70 75 80
 Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Phe Asn
 85 90 95
 Ala Gly Phe Gln Val Lys Lys Ser Phe Phe Arg Asn Phe Ser Thr
 100 105 110
 Ile Met Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Phe Ile Ile Ile
 115 120 125
 Ser Ala Gly Ala Ile Gly Ile Phe Lys Lys Met Asp Ile Gly His Leu
 130 135 140
 Glu Ile Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp
 145 150 155 160
 Ser Val Cys Thr Leu Gln Val Leu Asn Gln Glu Glu Thr Pro Leu Leu
 165 170 175
 Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val
 180 185 190
 Val Leu Phe Asn Ala Val Gln Asn Phe Asp Leu Ser His Ile Ser Thr

195	200	205
Gly Lys Ala Leu Gln Leu Ile Gly Asn Phe Leu Tyr Leu Phe Ala Ser		
210	215	220
Ser Thr Phe Leu Gly Val Ala Val Gly Leu Leu Ser Ala Phe Ile Ile		
225	230	235
Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Ile		
245	250	255
Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Tyr		
260	265	270
Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His		
275	280	285
Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His		
290	295	300
Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Ile Phe Leu Tyr		
305	310	315
Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Val Ser Asp		
325	330	335
Ser Pro Gly Thr Ser Ile Lys Val Ser Ser Ile Leu Leu Gly Leu Val		
340	345	350
Leu Val Gly Arg Gly Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn		
355	360	365
Leu Thr Lys Lys Asn Pro Glu Asp Lys Ile Ser Phe Asn Gln Gln Val		
370	375	380
Thr Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu		
385	390	395
Ala Tyr Asn Gln Phe Thr Arg Gly Gly His Thr Gln Leu Arg Ala Asn		
405	410	415
Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Val		
420	425	430
Val Phe Gly Leu Met Thr Lys Pro Leu Ile Leu Leu Leu Pro Ser		
435	440	445
Gln Lys His Leu Ile Arg Met Ile Ser Ser Glu Pro Met Thr Pro Lys		
450	455	460
Ser Phe Ile Val Pro Leu Leu Asp Ser Thr Gln Asp Ser Glu Ala Asp		
465	470	475
Leu Gly Arg His Val Pro Arg Pro His Ser Leu Arg Met Leu Leu Ser		
485	490	495
Thr Pro Ser His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asn Ala		
500	505	510
Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro		
515	520	525
Gly Ser Pro Thr Glu Pro Val Glu Pro Thr Glu Pro Arg Pro Ala Glu		
530	535	540
Ser Arg Pro Thr Glu Pro Thr Asp Glu		
545	550	

<210> 24
<211> 542
<212> PRT
<213> Citrus x paradisi

<400> 24
Met Asp Gln Ala Ile Ser Ser Val Val Arg Lys Leu Gln Met Val Asn
1 5 10 15
Thr Ser Asp His Asn Ser Val Val Ser Ile Asn Ile Phe Val Ala Leu
20 25 30

Pro Cys Ala Ser Ile Val Ile Gly His Leu Leu Glu Glu Ser Arg Trp
 35 40 45
 Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Val Cys Ala Gly Val
 50 55 60
 Ile Ile Leu Leu Thr Thr Gly Gly Lys Ser Ser His Leu Phe Val Phe
 65 70 75 80
 Ser Glu Asp Leu Phe Phe Ile Tyr Val Leu Pro Pro Ile Ile Phe Asn
 85 90 95
 Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Ile Thr
 100 105 110
 Ile Met Leu Phe Gly Ala Ile Gly Thr Leu Val Ser Cys Thr Ile Ile
 115 120 125
 Ser Leu Gly Val Ile Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Leu
 130 135 140
 Asp Ile Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp
 145 150 155 160
 Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Asp Thr Pro Leu Leu
 165 170 175
 Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val
 180 185 190
 Val Leu Phe Asn Ala Ile Gln Ser Phe Asp Leu Thr His Ile Asn Thr
 195 200 205
 Arg Ser Ala Phe Gln Phe Ile Gly Asn Phe Leu Tyr Leu Phe Phe Thr
 210 215 220
 Ser Thr Leu Leu Gly Val Ile Gly Gly Leu Leu Ser Ala Tyr Val Ile
 225 230 235 240
 Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Ile
 245 250 255
 Met Val Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Tyr
 260 265 270
 Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His
 275 280 285
 Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His
 290 295 300
 Thr Phe Ala Thr Leu Ser Phe Val Ala Glu Ile Phe Thr Phe Leu Tyr
 305 310 315 320
 Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Phe Val Lys Gly
 325 330 335
 Ser Pro Gly Thr Ser Val Ala Ala Ser Ala Met Leu Met Gly Leu Ile
 340 345 350
 Met Ala Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Thr Asn
 355 360 365
 Leu Ala Lys Lys Ser Pro Thr Glu Lys Ile Ser Ile Lys Gln Gln Val
 370 375 380
 Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu
 385 390 395 400
 Ala Tyr Asn Gln Phe Thr Arg Ser Gly His Thr Gln Leu Arg Glu Asn
 405 410 415
 Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Val
 420 425 430
 Val Phe Gly Leu Met Thr Glu Pro Leu Ile Arg Leu Leu Leu Pro His
 435 440 445
 Pro Lys His Thr Thr Asn His Ile Leu Ser Asp Pro Ser Thr Pro Lys
 450 455 460
 Ser Leu Ser Gln Pro Leu Leu Glu Glu Gly Gln Gln Asp Ser Tyr Ala
 465 470 475 480
 Asp Leu Val Gly Pro Thr Val Pro Arg Pro Gly Ser Leu Arg Ala Leu

485	490	495
Leu Thr Thr Pro Thr His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp		
500	505	510
Asp Ala Phe Met Arg Pro Val Phe Gly Gly Arg Gly Phe Ala Pro Phe		
515	520	525
Val Pro Gly Ser Pro Thr Glu Arg Ser Val Arg Gly Gly Gln		
530	535	540

<210> 25
<211> 546
<212> PRT
<213> Triticum aestivum

<400> 25			
Met Gly Leu Asp Leu Gly Ala Leu Ala Leu Lys Tyr Thr Gly Leu Ala			
1	5	10	15
Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu			
20	25	30	
Leu Cys Gly Cys Ile Val Phe Gly His Leu Leu Glu Gly Asn Arg Trp			
35	40	45	
Val Asn Glu Ser Thr Thr Ala Leu Val Leu Gly Leu Ile Thr Gly Gly			
50	55	60	
Val Ile Leu Ile Cys Thr Lys Gly Val Asn Ser Arg Ile Leu Ile Phe			
65	70	75	80
Ser Glu Asp Ile Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn			
85	90	95	
Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Ala Thr			
100	105	110	
Ile Ile Leu Phe Gly Ala Ala Gly Thr Leu Ile Ser Phe Val Ile Ile			
115	120	125	
Thr Phe Gly Ala Met Gly Leu Phe Ser Lys Leu Asp Val Gly Pro Leu			
130	135	140	
Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp			
145	150	155	160
Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Ala Pro Leu Leu			
165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val			
180	185	190	
Val Leu Phe Asn Ala Ile Gln Asn Ile Asp Ile Asn His Phe Asp Val			
195	200	205	
Phe Val Leu Leu Gln Phe Ile Gly Lys Phe Leu Tyr Leu Phe Phe Thr			
210	215	220	
Ser Thr Val Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile			
225	230	235	240
Lys Lys Leu Cys Phe Ala Arg His Ser Thr Asp Arg Glu Val Ala Ile			
245	250	255	
Met Ile Leu Met Ala Tyr Leu Ser Tyr Met Leu Ser Met Leu Leu Asp			
260	265	270	
Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His			
275	280	285	
Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His			
290	295	300	
Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Leu Phe Leu Tyr			
305	310	315	320
Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Lys Leu Ala Ser Ser			
325	330	335	

Ser Pro Lys Lys Pro Ile Ala Leu Ser Ala Val Ile Leu Gly Leu Val
 340 345 350
 Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Ser Lys Lys Glu Ser His Pro Lys Ile Ser Phe Asn Gln Gln Val
 370 375 380
 Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu
 385 390 395 400
 Ala Tyr Asn Lys Phe Thr Thr Ser Gly His Thr Ala Val Arg Val Asn
 405 410 415
 Ala Val Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr Met
 420 425 430
 Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro Pro
 435 440 445
 Arg Pro Gly Thr Ala Ala Asp Ile Ser Ser Gln Ser Phe Leu Asp Pro
 450 455 460
 Leu Thr Ala Ser Leu Leu Gly Ser Asp Phe Asp Val Gly Gln Leu Thr
 465 470 475 480
 Pro Gln Thr Asn Leu Gln Tyr Leu Leu Thr Met Pro Thr Arg Ser Val
 485 490 495
 His Arg Val Trp Arg Lys Phe Asp Asp Lys Phe Met Arg Pro Met Phe
 500 505 510
 Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Ile Glu Arg
 515 520 525
 Ser Val His Gly Pro Gly Leu Leu Gly Thr Val Thr Glu Ala Glu Asp
 530 535 540
 Arg Ser
 545

<210> 26
 <211> 538
 <212> PRT
 <213> Triticum aestivum

<400> 26
 Met Gly Tyr Gln Val Val Ala Ala Gln Leu Ala Arg Leu Ser Gly Ala
 1 5 10 15
 Leu Gly Thr Ser Asp His Ala Ser Val Val Ser Ile Thr Leu Phe Val
 20 25 30
 Ala Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn
 35 40 45
 Arg Trp Leu Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr
 50 55 60
 Gly Val Val Ile Leu Met Thr Thr Lys Gly Lys Ser Ser His Val Leu
 65 70 75 80
 Val Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile
 85 90 95
 Phe Asn Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe
 100 105 110
 Met Ala Ile Thr Leu Phe Gly Ala Val Gly Thr Met Met Ser Phe Phe
 115 120 125
 Thr Ile Ser Leu Ala Ala Ile Ala Ile Phe Ser Arg Met Asn Ile Gly
 130 135 140
 Thr Leu Asp Val Ser Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala
 145 150 155 160
 Thr Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro

	165	170	175												
Phe	Leu	Tyr	Ser	Leu	Val	Phe	Gly	Glu	Gly	Val	Val	Asn	Asp	Ala	Thr
				180			185						190		
Ser	Val	Val	Leu	Phe	Asn	Ala	Leu	Gln	Asn	Phe	Asp	Pro	Asn	Gln	Ile
				195			200					205			
Asp	Ala	Ile	Val	Ile	Leu	Lys	Phe	Leu	Gly	Asn	Phe	Cys	Tyr	Leu	Phe
				210			215					220			
Val	Ser	Ser	Thr	Phe	Leu	Gly	Val	Phe	Thr	Gly	Leu	Leu	Ser	Ala	Tyr
				225			230					235			240
Val	Ile	Lys	Lys	Leu	Tyr	Ile	Gly	Arg	His	Ser	Thr	Asp	Arg	Glu	Val
				245			250						255		
Ala	Leu	Val	Met	Leu	Met	Ala	Tyr	Leu	Ser	Tyr	Met	Leu	Ala	Glu	Leu
				260			265					270			
Leu	Asp	Leu	Ser	Gly	Ile	Leu	Thr	Val	Phe	Phe	Cys	Gly	Ile	Val	Met
				275			280					285			
Ser	His	Tyr	Thr	Trp	His	Asn	Val	Thr	Glu	Ser	Ser	Arg	Val	Thr	Thr
				290			295					300			
Lys	His	Ala	Phe	Ala	Thr	Leu	Ser	Phe	Ile	Ala	Glu	Thr	Phe	Leu	Phe
				305			310					315			320
Leu	Tyr	Val	Gly	Met	Asp	Ala	Leu	Asp	Ile	Glu	Lys	Trp	Lys	Phe	Ala
				325			330					335			
Ser	Asp	Ser	Pro	Gly	Lys	Ser	Ile	Gly	Ile	Ser	Ser	Ile	Leu	Leu	Gly
				340			345					350			
Leu	Val	Leu	Val	Gly	Arg	Ala	Ala	Phe	Val	Phe	Pro	Leu	Ser	Phe	Leu
				355			360					365			
Ser	Asn	Leu	Thr	Lys	Lys	Thr	Glu	Leu	Glu	Lys	Ile	Ser	Trp	Arg	Gln
				370			375					380			
Gln	Ile	Val	Ile	Trp	Trp	Ala	Gly	Leu	Met	Arg	Gly	Ala	Val	Ser	Ile
				385			390					395			400
Ala	Leu	Ala	Tyr	Asn	Lys	Phe	Thr	Arg	Ser	Gly	His	Thr	Gln	Leu	His
				405			410					415			
Gly	Asn	Ala	Ile	Met	Ile	Thr	Ser	Thr	Ile	Thr	Val	Val	Leu	Phe	Ser
				420			425					430			
Thr	Met	Leu	Phe	Gly	Ile	Leu	Thr	Lys	Pro	Leu	Ile	Arg	Phe	Leu	Leu
				435			440					445			
Pro	Ala	Ser	Ser	Asn	Gly	Ala	Ala	Ser	Asp	Pro	Ala	Ser	Pro	Lys	Ser
				450			455					460			
Leu	His	Ser	Pro	Leu	Leu	Thr	Ser	Gln	Leu	Gly	Ser	Asp	Leu	Glu	Ala
				465			470					475			480
Pro	Leu	Pro	Ile	Val	Arg	Pro	Ser	Ser	Leu	Arg	Met	Leu	Ile	Thr	Lys
				485			490					495			
Pro	Thr	His	Thr	Ile	His	Tyr	Tyr	Trp	Arg	Lys	Phe	Asp	Asp	Ala	Leu
				500			505					510			
Met	Arg	Pro	Met	Phe	Gly	Gly	Arg	Gly	Phe	Val	Pro	Tyr	Ser	Pro	Gly
				515			520					525			
Ser	Pro	Thr	Asp	Pro	Asn	Val	Leu	Val	Glu						
				530			535								

<210> 27
<211> 546
<212> PRT
<213> Triticum aestivum

<400> 27
Met Gly Leu Asp Leu Gly Ala Leu Ala Leu Lys Tyr Thr Gly Leu Ala
1 5 10 15

Val Ser Asp His Asp Ser Ile Val Ala Ile Asn Ile Phe Ile Ala Leu
 20 25 30
 Leu Cys Gly Cys Ile Val Phe Gly His Leu Leu Gly Gly Asn Arg Trp
 35 40 45
 Val Asn Glu Ser Thr Ala Ala Leu Val Leu Gly Leu Ile Thr Gly Gly
 50 55 60
 Val Ile Leu Ile Cys Thr Lys Gly Val Asn Ser Arg Ile Leu Ile Phe
 65 70 75 80
 Ser Glu Asp Ile Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn
 85 90 95
 Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Ala Thr
 100 105 110
 Ile Ile Leu Phe Gly Ala Ala Gly Thr Leu Ile Ser Phe Val Ile Ile
 115 120 125
 Thr Phe Gly Ala Met Gly Leu Phe Ser Lys Leu Asp Val Gly Pro Leu
 130 135 140
 Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp
 145 150 155 160
 Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Ala Pro Leu Leu
 165 170 175
 Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val
 180 185 190
 Val Leu Phe Asn Ala Ile Gln Asn Ile Asp Ile Asn His Phe Asp Val
 195 200 205
 Phe Gly Leu Leu Gln Phe Ile Gly Lys Phe Leu Tyr Leu Phe Phe Thr
 210 215 220
 Ser Thr Val Leu Gly Val Ala Ala Gly Leu Leu Ser Ala Tyr Ile Ile
 225 230 235 240
 Lys Lys Leu Cys Phe Ala Arg His Ser Thr Asp Arg Glu Val Ala Ile
 245 250 255
 Met Ile Leu Met Ala Tyr Leu Ser Cys Met Leu Ser Met Leu Leu Asp
 260 265 270
 Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His
 275 280 285
 Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His
 290 295 300
 Thr Phe Ala Thr Leu Ser Phe Ile Ala Glu Ile Phe Leu Phe Leu Tyr
 305 310 315 320
 Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Lys Leu Ala Ser Ser
 325 330 335
 Ser Pro Lys Lys Pro Ile Ala Leu Ser Ala Val Ile Leu Gly Leu Val
 340 345 350
 Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Ser Lys Lys Glu Ser His Pro Lys Ile Ser Phe Asn Gln Gln Val
 370 375 380
 Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu
 385 390 395 400
 Ala Tyr Asn Lys Phe Thr Thr Ser Gly His Thr Ala Val Arg Val Asn
 405 410 415
 Ala Val Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr Met
 420 425 430
 Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro Pro
 435 440 445
 Arg Pro Gly Thr Ala Ala Asp Ile Ser Ser Gln Ser Phe Leu Asp Pro
 450 455 460
 Leu Thr Ala Ser Leu Leu Gly Ser Asp Phe Asp Val Gly Gln Leu Thr

465	470	475	480
Pro Gln Thr Asn Leu Gln Tyr Leu Leu Thr Met Pro Thr Arg Ser Ala			
485	490	495	
His Arg Val Trp Arg Lys Phe Asp Asp Lys Phe Met Arg Pro Met Phe			
500	505	510	
Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Ile Glu Arg			
515	520	525	
Ser Val His Gly Pro Gly Leu Leu Gly Thr Val Thr Glu Ala Glu Asp			
530	535	540	
Arg Ser			
545			

<210> 28
<211> 540
<212> PRT
<213> Zea mays

<400> 28			
Met Gly Leu Gly Val Val Ala Glu Leu Val Arg Leu Gly Val Leu Ser			
1	5	10	15
Ser Thr Ser Asp His Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala			
20	25	30	
Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg			
35	40	45	
Trp Val Asn Glu Ser Thr Ala Leu Ile Val Gly Leu Gly Thr Gly Thr			
50	55	60	
Val Ile Leu Met Ile Ser Arg Gly Val Val Ile His Val Leu Val Phe			
65	70	75	80
Ser Glu Asp Leu Phe Phe Tyr Leu Leu Pro Pro Ile Ile Phe Asn			
85	90	95	
Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Ile Thr			
100	105	110	
Ile Thr Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Phe Thr Val Ile			
115	120	125	
Ser Leu Gly Ala Leu Gly Leu Ile Ser Arg Leu Asn Ile Gly Ala Leu			
130	135	140	
Glu Leu Gly Asp Tyr Leu Ala Leu Gly Ala Ile Phe Ser Ala Thr Asp			
145	150	155	160
Ser Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Phe Leu			
165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val			
180	185	190	
Val Val Phe Asn Ala Leu Gln Asn Phe Asp Ile Thr His Ile Asp Ala			
195	200	205	
Glu Val Val Phe His Leu Leu Gly Asn Phe Phe Tyr Leu Phe Leu Leu			
210	215	220	
Ser Thr Val Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Leu Val Ile			
225	230	235	240
Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu			
245	250	255	
Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ala			
260	265	270	
Leu Ser Gly Ile Leu Thr Val Phe Phe Gly Cys Ile Val Met Ser His			
275	280	285	
Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys His			
290	295	300	

Ala Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Leu Phe Leu Tyr
 305 310 315 320
 Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser Asp
 325 330 335
 Thr Pro Gly Lys Ser Leu Ala Ile Ser Ser Ile Leu Met Gly Leu Val
 340 345 350
 Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn
 355 360 365
 Leu Ala Lys Lys Thr Glu His Glu Lys Ile Ser Trp Lys Gln Gln Val
 370 375 380
 Val Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu
 385 390 395 400
 Ala Tyr Lys Lys Phe Thr Arg Ala Gly His Thr Gln Val Arg Gly Asn
 405 410 415
 Ala Ile Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr Met
 420 425 430
 Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro His
 435 440 445
 Arg Asn Ala Thr Ser Met Leu Ser Asp Asp Ser Ser Pro Lys Ser Leu
 450 455 460
 His Ser Pro Leu Leu Thr Ser Gln Leu Gly Ser Asp Leu Glu Glu Pro
 465 470 475 480
 Thr Asn Ile Pro Arg Pro Ser Ser Ile Arg Gly Glu Phe Leu Thr Met
 485 490 495
 Thr Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Ala Phe Met
 500 505 510
 Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser
 515 520 525
 Pro Thr Glu Arg Asn Pro Pro Asp Leu Ser Lys Ala
 530 535 540

<210> 29
 <211> 540
 <212> PRT
 <213> Zea mays

<400> 29
 Met Gly Leu Gly Val Asp Ala Glu Thr Val Arg Leu Gly Val Leu Ser
 1 5 10 15
 Ser Thr Ser Asp His Ala Ser Val Val Ser Asn Asn Phe Phe Val Ala
 20 25 30
 Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg
 35 40 45
 Met Val Asn Glu Ser Ile Thr Ala Leu Leu Val Gly Leu Gly Thr Gly
 50 55 60
 Thr Val Ile Leu Met Ile Ser Arg Gly Val Ser Ile His Val Leu Val
 65 70 75 80
 Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
 85 90 95
 Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile
 100 105 110
 Thr Ile Ile Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Phe Val Ile
 115 120 125
 Ile Ser Leu Gly Ala Met Gly Leu Phe Lys Lys Leu Asp Val Gly Pro
 130 135 140
 Leu Glu Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr

145	150	155	160
Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu			
165	170	175	
Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser			
180	185	190	
Ile Val Val Phe Asn Ala Leu Gln Asn Phe Asp Ile Thr His Ile Asn			
195	200	205	
Ala Glu Val Val Phe His Leu Leu Gly Asn Phe Leu Tyr Leu Phe Leu			
210	215	220	
Leu Ser Thr Val Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Leu Val			
225	230	235	240
Ile Lys Lys Ile Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala			
245	250	255	
Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe			
260	265	270	
Ala Leu Ser Gly Ile Leu Thr Val Phe Phe Gly Cys Ile Val Met Ser			
275	280	285	
His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys			
290	295	300	
His Ala Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Ile Phe Leu			
305	310	315	320
Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Arg Ser Val Ser			
325	330	335	
Asp Thr Pro Gly Lys Ser Ile Ala Ile Ser Ser Ile Leu Met Gly Leu			
340	345	350	
Val Met Leu Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser			
355	360	365	
Asn Leu Ala Lys Lys Asn Glu His Glu Lys Ile Ser Trp Lys Gln Gln			
370	375	380	
Val Val Ile Trp Trp Ser Gly Leu Met Arg Gly Ala Val Ser Met Ala			
385	390	395	400
Leu Ala Tyr Asn Lys Phe Thr Arg Ala Gly His Thr Glu Val Arg Gly			
405	410	415	
Asn Glu Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr			
420	425	430	
Val Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Arg Leu Leu Met Pro			
435	440	445	
His Arg His Leu Thr Met Leu Ser Asp Asp Ser Thr Pro Lys Ser Leu			
450	455	460	
His Ser Pro Leu Leu Thr Ser Gln Leu Gly Ser Ser Ile Glu Glu Pro			
465	470	475	480
Thr Gln Ile Pro Arg Pro Thr Asn Ile Arg Gly Glu Phe Thr Thr Met			
485	490	495	
Thr Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Lys Phe Met			
500	505	510	
Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser			
515	520	525	
Pro Thr Glu Arg Asn Pro His Asp Leu Ser Lys Pro			
530	535	540	

<210> 30
<211> 539
<212> PRT
<213> Zea mays

<400> 30

Met Ser Ile Gly Leu Thr Ala Glu Thr Val Thr Asn Lys Leu Ala Ser
 1 5 10 15
 Ala Glu His Pro Gln Val Val Pro Asn Ser Val Phe Ile Ala Leu Leu
 20 25 30
 Cys Leu Cys Leu Val Ile Gly His Leu Leu Glu Glu Asn Arg Trp Val
 35 40 45
 Asn Glu Ser Ile Thr Ala Ile Leu Val Gly Ala Ala Thr Gly Thr Val
 50 55 60
 Ile Leu Leu Ile Ser Lys Gly Lys Ser Ser His Ile Leu Val Phe Asp
 65 70 75 80
 Glu Glu Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala
 85 90 95
 Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Ile Thr Ile
 100 105 110
 Ile Leu Phe Gly Ala Ile Gly Thr Leu Ile Ser Phe Val Ile Ile Ser
 115 120 125
 Leu Gly Ala Met Gly Leu Phe Lys Lys Leu Asp Val Gly Pro Leu Glu
 130 135 140
 Leu Gly Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser
 145 150 155 160
 Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu Leu Tyr
 165 170 175
 Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val
 180 185 190
 Leu Phe Asn Ala Val Gln Lys Ile Asp Phe Glu His Leu Thr Gly Glu
 195 200 205
 Val Ala Leu Gln Val Phe Gly Asn Phe Leu Tyr Leu Phe Ser Thr Ser
 210 215 220
 Thr Val Leu Gly Ile Ala Thr Gly Leu Ile Thr Ala Phe Val Leu Lys
 225 230 235 240
 Thr Leu Tyr Phe Gly Arg His Ser Thr Thr Arg Glu Leu Ala Ile Met
 245 250 255
 Val Leu Met Ala Tyr Leu Ser Phe Met Leu Ala Glu Leu Phe Ser Leu
 260 265 270
 Ser Gly Ile Ile Thr Val Phe Phe Cys Gly Val Leu Met Ser His Val
 275 280 285
 Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Ser Arg His Val
 290 295 300
 Phe Ala Met Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe Leu Tyr Val
 305 310 315 320
 Gly Thr Asp Ala Leu Asp Phe Thr Lys Trp Lys Thr Ser Ser Leu Ser
 325 330 335
 Phe Gly Lys Ser Leu Gly Val Ser Ser Val Leu Leu Gly Leu Val Leu
 340 345 350
 Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu
 355 360 365
 Ser Lys Lys His Pro Gly Glu Lys Ile Thr Ile Arg Gln Gln Val Val
 370 375 380
 Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala
 385 390 395 400
 Phe Asn Lys Phe Thr Arg Ala Gly His Thr Gln Val Arg Gly Asn Ala
 405 410 415
 Ile Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr Val Val
 420 425 430
 Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro His Arg
 435 440 445
 Asn Ala Thr Ser Met Leu Ser Asp Asp Ser Ser Pro Lys Ser Leu His

450	455	460
Ser Pro Leu Leu Thr Ser Gln Leu Ile Ser Ser Ile Glu Glu Pro Thr		
465	470	475
Gln Ile Pro Arg Pro Thr Asn Ile Arg Gly Glu Phe Met Thr Met Thr		
485	490	495
Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Lys Phe Met Arg		
500	505	510
Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro		
515	520	525
Thr Glu Arg Ser Ser Pro Asp Leu Ser Lys Ala		
530	535	

<210> 31
<211> 538
<212> PRT
<213> Zea mays

<400> 31		
Met Gly Tyr Gln Val Val Ala Ala Gln Leu Lys Leu Ala Ser Ser Ala		
1	5	10
Asp His Ala Ser Val Val Ile Ile Thr Leu Phe Val Ala Leu Leu Cys		
20	25	30
Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp Leu Asn		
35	40	45
Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Gly Thr Gly Val Val Ile		
50	55	60
Leu Leu Ile Ser Arg Gly Lys Asn Ser Arg Leu Leu Val Phe Ser Glu		
65	70	75
Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly		
85	90	95
Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr Ile Thr		
100	105	110
Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile Ser Leu		
115	120	125
Gly Ala Ile Ala Thr Phe Ser Arg Met Ser Ile Gly Thr Leu Asp Val		
130	135	140
Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser Val		
145	150	155
Cys Thr Leu Gln Val Leu His Gln Asp Glu Thr Pro Phe Leu Tyr Ser		
165	170	175
Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val Val Leu		
180	185	190
Phe Asn Ala Val Gln Lys Ile Gln Phe Thr His Ile Asn Ala Trp Thr		
195	200	205
Ala Leu Gln Leu Ile Gly Asn Phe Leu Tyr Leu Phe Ser Thr Ser Thr		
210	215	220
Leu Leu Gly Ile Gly Thr Gly Leu Ile Thr Ala Phe Val Leu Lys Lys		
225	230	235
Leu Tyr Phe Gly Arg His Ser Thr Thr Arg Glu Leu Ala Ile Met Ile		
245	250	255
Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ser Leu Ser		
260	265	270
Gly Leu Leu Thr Val Phe Phe Cys Gly Val Leu Met Ser His Val Thr		
275	280	285
Trp His Asn Val Thr Glu Ser Ser Arg Thr Thr Ser Arg His Val Phe		
290	295	300

Ala Thr Leu Ser Phe Ile Ser Glu Thr Phe Ile Phe Leu Tyr Val Gly
 305 310 315 320
 Met Asp Ala Leu Asp Phe Glu Lys Trp Lys Thr Ser Ser Leu Ser Phe
 325 330 335
 Gly Gly Thr Leu Gly Val Ser Gly Val Leu Met Gly Leu Val Met Leu
 340 345 350
 Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu Ala
 355 360 365
 Lys Lys His Gln Ser Glu Lys Ile Ser Phe Arg Met Gln Val Val Ile
 370 375 380
 Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala Leu Ala Leu
 385 390 395 400
 Asn Lys Phe Thr Arg Ser Gly His Thr Gln Leu His Gly Asn Ala Ile
 405 410 415
 Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Met Val Phe
 420 425 430
 Gly Met Ile Thr Lys Pro Leu Ile Arg Leu Leu Leu Pro Ala Ser Gly
 435 440 445
 His Pro Arg Glu Leu Ser Glu Pro Ser Ser Pro Lys Ser Phe His Ser
 450 455 460
 Pro Leu Leu Thr Ser Gln Gln Gly Ser Asp Leu Glu Ser Thr Thr Asn
 465 470 475 480
 Ile Val Arg Pro Ser Ser Leu Arg Gly Leu Leu Thr Lys Pro Thr His
 485 490 495
 Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu Met Arg Pro
 500 505 510
 Val Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Thr
 515 520 525
 Glu Arg Asn Pro Pro Asp Leu Ser Lys Ala
 530 535

<210> 32
 <211> 545
 <212> PRT
 <213> Zea mays

<400> 32

Met Ser Met Gly Tyr Gln Val Val Ala Ala Gln Leu Lys Val Ala Ser
 1 5 10 15
 Ser Ala Asp His Ala Ser Val Val Ile Ile Thr Leu Phe Val Ala Leu
 20 25 30
 Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg Trp
 35 40 45
 Leu Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Gly
 50 55 60
 Val Ile Leu Met Thr Thr Lys Gly Lys Ser Ser His Val Leu Val Phe
 65 70 75 80
 Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Ile
 85 90 95
 Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe Met Thr
 100 105 110
 Ile Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile
 115 120 125
 Ser Leu Gly Ala Ile Ala Ile Phe Ser Arg Met Asn Ile Gly Thr Leu
 130 135 140
 Asp Val Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp

145	150	155	160
Ser Val Cys Thr Leu Gln Val Leu His Gln Asp Glu Thr Pro Phe Leu			
165	170	175	
Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Val			
180	185	190	
Val Leu Phe Asn Ala Val Gln Lys Ile Gln Ile Thr His Ile Asn Ala			
195	200	205	
Glu Val Ala Leu Gln Val Phe Gly Asn Phe Leu Tyr Leu Phe Ser Thr			
210	215	220	
Ser Thr Leu Leu Gly Ile Ala Thr Gly Leu Ile Thr Ser Phe Val Leu			
225	230	235	240
Lys Lys Leu Tyr Phe Ala Arg His Ser Thr Thr Arg Glu Leu Ala Ile			
245	250	255	
Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe Ser			
260	265	270	
Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Val Leu Met Ser His			
275	280	285	
Val Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Ser Arg His			
290	295	300	
Val Phe Ala Met Leu Ser Phe Ile Ala Glu Thr Phe Ile Phe Leu Tyr			
305	310	315	320
Val Gly Thr Asp Ala Leu Asp Phe Asp Lys Trp Lys Thr Ser Ser Leu			
325	330	335	
Ser Phe Gly Gly Thr Leu Gly Val Ser Ala Leu Ile Met Ala Leu Val			
340	345	350	
Leu Leu Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Val Leu Thr Asn			
355	360	365	
Phe Ser Asn Lys His Glu Asn Glu Ser Ile Thr Phe Lys His Gln Val			
370	375	380	
Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu			
385	390	395	400
Ala Phe Lys Gln Phe Thr Tyr Ser Gly Val Thr Leu Asp Pro Val Asn			
405	410	415	
Ala Ala Met Val Thr Asn Thr Thr Ile Val Val Leu Phe Thr Thr Leu			
420	425	430	
Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Arg Leu Leu Met Pro His			
435	440	445	
Arg His Leu Thr Met Leu Ser Asp Asp Ser Thr Pro Lys Ser Leu His			
450	455	460	
Ser Pro Leu Leu Thr Ser Gln Leu Gly Ser Asp Leu Glu Glu Pro Thr			
465	470	475	480
Asn Ile Pro Arg Pro Ser Ser Ile Arg Gly Glu Phe Leu Thr Met Thr			
485	490	495	
Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Ala Phe Met Arg			
500	505	510	
Pro Met Phe Gly Gly Arg Gly Phe Val Pro Val Val Pro Gly Ser Pro			
515	520	525	
Ile Glu Arg Ser Val Pro Gln Trp Ser Glu Glu Ala His Asn Lys Glu			
530	535	540	
Pro			
545			

<210> 33
<211> 541
<212> PRT
<213> Zea mays

<400> 33

Met Gly Leu Gly Val Val Ala Glu Leu Val Arg Leu Gly Val Leu Ser
1 5 10 15
Ser Thr Ser Asp His Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala
20 25 30
Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn Arg
35 40 45
Trp Val Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly
50 55 60
Val Val Ile Leu Leu Thr Thr Lys Gly Lys Ser Ser His Ile Leu Val
65 70 75 80
Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
85 90 95
Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met
100 105 110
Thr Ile Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr
115 120 125
Ile Ser Leu Gly Ala Leu Gly Leu Ile Ser Arg Leu Asn Ile Gly Ala
130 135 140
Leu Glu Leu Gly Asp Tyr Leu Ala Leu Gly Ala Ile Phe Ser Ala Thr
145 150 155 160
Asp Ser Val Cys Thr Leu Gln Val Leu Ser Gln Asp Glu Thr Pro Phe
165 170 175
Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser
180 185 190
Val Val Val Phe Asn Ala Leu Gln Asn Phe Asp Ile Thr His Ile Asp
195 200 205
Ala Glu Val Val Phe His Leu Leu Gly Asn Phe Phe Tyr Leu Phe Leu
210 215 220
Leu Ser Thr Val Leu Gly Val Ala Thr Gly Leu Ile Ser Ala Leu Val
225 230 235 240
Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Val Ala
245 250 255
Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Phe
260 265 270
Ala Leu Ser Gly Ile Leu Thr Val Phe Phe Gly Cys Ile Val Met Ser
275 280 285
His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Ile Thr Thr Lys
290 295 300
His Ala Phe Ala Thr Leu Ser Phe Leu Ala Glu Thr Phe Leu Phe Leu
305 310 315 320
Tyr Val Gly Met Asp Ala Leu Asp Ile Asp Lys Trp Arg Ser Val Ser
325 330 335
Asp Thr Pro Gly Lys Ser Leu Ala Ile Ser Ser Ile Leu Met Gly Leu
340 345 350
Val Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser
355 360 365
Asn Leu Ala Lys Lys Thr Glu His Glu Lys Ile Ser Trp Lys Gln Gln
370 375 380
Val Val Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala
385 390 395 400
Leu Ala Tyr Lys Lys Phe Thr Arg Ala Gly His Thr Gln Val Arg Gly
405 410 415
Asn Ala Ile Met Ile Thr Ser Thr Ile Ile Val Val Leu Phe Ser Thr
420 425 430
Met Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Asn Leu Leu Ile Pro

435	440	445
His Arg Asn Ala Thr Ser Met Leu Ser Asp Asp Ser Ser Pro Lys Ser		
450	455	460
Leu His Ser Pro Leu Leu Thr Ser Gln Leu Gly Ser Asp Leu Glu Glu		
465	470	475
Pro Thr Asn Ile Pro Arg Pro Ser Ser Ile Arg Gly Glu Phe Leu Thr		
485	490	495
Met Thr Arg Thr Val His Arg Tyr Trp Arg Lys Phe Asp Asp Ala Phe		
500	505	510
Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly		
515	520	525
Ser Pro Thr Glu Arg Asn Pro Pro Asp Leu Ser Lys Ala		
530	535	540

<210> 34
<211> 543
<212> PRT
<213> *Gossypium hirsutum*

<400> 34		
Met Val Ala Pro Gln Leu Ala Ala Val Phe Thr Lys Leu Gln Thr Leu		
1	5	10
Ser Thr Ser Asp His Ala Ser Val Val Ser Met Asn Ile Phe Val Ala		
20	25	30
Leu Leu Cys Ala Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg		
35	40	45
Trp Met Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Val Phe Thr Gly		
50	55	60
Val Ile Ile Leu Leu Thr Ser Gly Gly Lys Ser Ser His Leu Leu Val		
65	70	75
Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe		
85	90	95
Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile		
100	105	110
Thr Ile Met Leu Phe Gly Ala Val Gly Thr Leu Ile Ser Cys Thr Ile		
115	120	125
Ile Ser Leu Gly Val Ile Asn Phe Phe Lys Glu Met Asp Ile Gly Ser		
130	135	140
Leu Asp Ile Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr		
145	150	155
Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu		
165	170	175
Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser		
180	185	190
Val Val Leu Phe Asn Ala Ile Gln Ser Phe Asp Leu Val Asn Thr Ser		
195	200	205
Pro Arg Ile Leu Leu Glu Phe Ile Gly Ser Phe Leu Tyr Leu Phe Leu		
210	215	220
Ala Ser Thr Met Leu Gly Val Ile Val Gly Leu Val Ser Ala Tyr Ile		
225	230	235
Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp Arg Glu Phe Ala		
245	250	255
Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Ile Met Ala Glu Leu Phe		
260	265	270
Tyr Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser		
275	280	285

His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys
 290 295 300
 His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Thr Phe Leu Phe Leu
 305 310 315 320
 Tyr Val Gly Met Asp Ala Leu Asp Met Glu Lys Trp Arg Phe Val Ser
 325 330 335
 Asp Ser Pro Gly Thr Ser Val Ala Val Ser Ala Val Leu Met Gly Leu
 340 345 350
 Val Met Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser
 355 360 365
 Asn Leu Ala Lys Lys Ser Thr Ser Glu Lys Ile Ser Phe Arg Glu Gln
 370 375 380
 Ile Ile Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Met Ala
 385 390 395 400
 Leu Ala Tyr Asn Gln Phe Thr Arg Gly Gly His Thr Gln Leu Arg Gly
 405 410 415
 Asn Ala Ile Met Ile Thr Ser Thr Ile Thr Ile Val Leu Phe Ser Thr
 420 425 430
 Val Val Phe Gly Leu Met Thr Lys Pro Leu Ile Arg Phe Leu Leu Pro
 435 440 445
 His Pro Lys Pro Thr Ala Ser Met Leu Ser Asp Gln Ser Thr Pro Lys
 450 455 460
 Ser Met Glu Ala Pro Phe Leu Gly Ser Gly Gln Asp Ser Phe Asp Asp
 465 470 475 480
 Ser Leu Ile Gly Val His Arg Pro Asn Ser Ile Arg Ala Leu Leu Thr
 485 490 495
 Thr Pro Ala His Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asn Ala
 500 505 510
 Phe Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro
 515 520 525
 Gly Ser Pro Thr Glu Arg Ser Glu Pro Asn Leu Pro Gln Trp Gln
 530 535 540

<210> 35
 <211> 557
 <212> PRT
 <213> Suaeda maritima

<400> 35
 Met Trp Ser Gln Leu Ser Ser Phe Phe Ala Ser Lys Met Asp Met Val
 1 5 10 15
 Ser Thr Ser Asp His Ala Ser Val Val Ser Met Asn Leu Phe Val Ala
 20 25 30
 Leu Leu Cys Gly Cys Ile Val Ile Gly His Leu Leu Glu Glu Asn Arg
 35 40 45
 Trp Met Asn Glu Ser Ile Thr Ala Leu Leu Ile Gly Leu Ser Thr Gly
 50 55 60
 Ile Ile Ile Leu Leu Ile Ser Gly Gly Lys Ser Ser His Leu Leu Val
 65 70 75 80
 Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe
 85 90 95
 Asn Ala Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Ile
 100 105 110
 Thr Ile Ile Leu Phe Gly Ala Val Gly Thr Leu Val Ser Phe Ile Ile
 115 120 125
 Ile Ser Leu Gly Ser Ile Ala Ile Phe Gln Lys Met Asp Ile Gly Ser

130	135	140
Leu Glu Leu Gly Asp	Leu Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr	
145	150	155 160
Asp Ser Val Cys Thr	Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Leu	
	165	170 175
Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser		
	180	185 190
Val Val Leu Phe Asn Ala Ile Gln Asn Phe Asp Leu Thr His Ile Asp		
	195	200 205
His Arg Ile Ala Tyr Arg	Ile Ala Phe Gln Phe Gly Gly Asn Phe Leu	
	210	215 220
Tyr Leu Phe Phe Ala Ser	Thr Leu Leu Gly Ala Val Thr Gly Leu Leu	
	225	230 235 240
Ser Ala Tyr Val Ile Lys Lys Leu Tyr Phe Gly Arg His Ser Thr Asp		
	245	250 255
Arg Glu Val Ala Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu		
	260	265 270
Ala Glu Leu Phe Tyr Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly		
	275	280 285
Ile Val Met Ser His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg		
	290	295 300
Val Thr Thr Lys His Ala Phe Ala Thr Leu Ser Phe Val Ala Glu Ile		
	305	310 315 320
Phe Ile Phe Leu Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp		
	325	330 335
Arg Phe Val Ser Asp Ser Pro Gly Thr Ser Val Ala Val Ser Ser Ile		
	340	345 350
Leu Leu Gly Leu Leu Met Val Gly Arg Ala Leu Leu Phe Ser Leu Val		
	355	360 365
Phe Leu Met Asn Leu Ser Lys Lys Ser Asn Ser Glu Lys Val Thr Phe		
	370	375 380
Asn Gln Gln Ile Val Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val		
	385	390 395 400
Ser Val Ala Leu Ala Tyr Asn Gln Phe Ser Arg Ser Gly His Thr Gln		
	405	410 415
Leu Arg Gly Asn Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu		
	420	425 430
Phe Ser Thr Met Val Phe Gly Leu Leu Thr Lys Pro Leu Ile Leu Phe		
	435	440 445
Met Leu Pro Gln Pro Lys His Phe Thr Ser Ala Ser Thr Val Ser Asp		
	450	455 460
Leu Gly Ser Pro Lys Ser Phe Ser Leu Pro Leu Leu Glu Asp Arg Gln		
	465	470 475 480
Asp Ser Glu Ala Asp Leu Gly Asn Asp Asp Glu Glu Ala Tyr Pro Arg		
	485	490 495
Gly Thr Ile Ala Arg Pro Thr Ser Leu Arg Met Leu Leu Asn Ala Pro		
	500	505 510
Thr His Thr Val His His Tyr Trp Arg Arg Phe Asp Asp Tyr Phe Met		
	515	520 525
Arg Pro Val Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser		
	530	535 540
Pro Thr Glu Gln Ser Thr Thr Asn Leu Ser Gln Arg Thr		
	545	550 555

<210> 36

<211> 538

<212> PRT

<213> Hordeum vulgare

<400> 36

Met Ala Phe Glu Val Val Ala Ala Gln Leu Ala Arg Leu Ser Asp Ala
1 5 10 15
Leu Ala Thr Ser Asp His Ala Ser Val Val Ser Ile Asn Leu Phe Val
20 25 30
Ala Leu Leu Cys Ala Cys Ile Val Leu Gly His Leu Leu Glu Glu Asn
35 40 45
Arg Trp Leu Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr
50 55 60
Gly Val Val Ile Leu Met Thr Thr Lys Gly Lys Ser Ser His Val Leu
65 70 75 80
Val Phe Ser Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile
85 90 95
Phe Asn Ala Gly Phe Gln Val Lys Lys Gln Phe Phe Arg Asn Phe
100 105 110
Met Thr Ile Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe
115 120 125
Thr Ile Ser Leu Ala Ala Ile Ala Ile Phe Ser Lys Met Asn Ile Gly
130 135 140
Thr Leu Asp Val Ser Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala
145 150 155 160
Thr Asp Ser Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro
165 170 175
Phe Leu Tyr Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr
180 185 190
Ser Val Val Leu Phe Asn Ala Leu Gln Asn Phe Asp Pro Asn Gln Ile
195 200 205
Asp Ala Ile Val Ile Leu Lys Phe Leu Gly Asn Phe Cys Tyr Leu Phe
210 215 220
Val Ser Ser Thr Phe Leu Gly Val Phe Ser Gly Leu Leu Ser Ala Tyr
225 230 235 240
Ile Ile Lys Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val
245 250 255
Ala Leu Met Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu
260 265 270
Leu Asp Leu Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met
275 280 285
Ser His Tyr Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr
290 295 300
Lys His Ala Phe Ala Thr Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe
305 310 315 320
Leu Tyr Val Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Lys Phe Ala
325 330 335
Ser Asp Ser Pro Gly Lys Ser Ile Gly Ile Ser Ser Ile Leu Leu Gly
340 345 350
Leu Val Leu Val Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu
355 360 365
Ser Asn Leu Thr Lys Lys Thr Glu Leu Glu Lys Ile Ser Trp Arg Gln
370 375 380
Gln Ile Val Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile
385 390 395 400
Ala Leu Ala Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Gln Leu His
405 410 415
Gly Asn Ala Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser

420	425	430
Thr Met Leu Phe Gly Ile Leu Thr Lys Pro Leu Ile Arg Phe Leu Leu		
435	440	445
Pro Ala Ser Ser Asn Gly Asp Pro Ser Glu Pro Ser Ser Pro Lys Ser		
450	455	460
Leu His Ser Pro Leu Leu Thr Ser Met Leu Gly Ser Asp Met Glu Ala		
465	470	475
Pro Leu Pro Ile Val Arg Pro Ser Ser Leu Arg Met Leu Ile Thr Lys		
485	490	495
Pro Thr His Thr Ile His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu		
500	505	510
Met Arg Pro Met Phe Gly Gly Arg Gly Phe Val Pro Tyr Ser Pro Gly		
515	520	525
Ser Pro Thr Asp Pro Asn Val Ile Val Ala		
530	535	

<210> 37
<211> 540
<212> PRT
<213> Hordeum brevisubulatum

<400> 37		
Met Gly Trp Gly Leu Gly Asp Pro Pro Ala Asp Tyr Gly Ser Ile Met		
1	5	10
Ala Val Gly Leu Phe Val Ala Leu Met Cys Ile Cys Ile Ile Val Gly		
20	25	30
His Leu Leu Glu Glu Asn Arg Trp Met Asn Glu Ser Thr Thr Ala Leu		
35	40	45
Leu Leu Gly Leu Gly Ala Gly Thr Val Ile Leu Phe Ala Ser Ser Gly		
50	55	60
Lys Asn Ser Arg Leu Met Val Phe Ser Glu Asp Leu Phe Phe Ile Tyr		
65	70	75
Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe Gln Val Lys Lys Lys		
85	90	95
Gln Phe Phe Arg Asn Phe Met Thr Ile Thr Leu Phe Ala Val Val Gly		
100	105	110
Thr Leu Ile Ser Phe Ser Ile Ile Ser Leu Gly Ala Met Gly Leu Ile		
115	120	125
Ser Arg Leu Asn Ile Gly Ala Leu Glu Leu Gly Asp Tyr Leu Ala Leu		
130	135	140
Gly Ala Ile Phe Ser Ala Thr Asp Ser Val Cys Thr Leu Gln Val Leu		
145	150	155
Ser Gln Asp Glu Thr Pro Phe Leu Tyr Ser Leu Val Phe Gly Glu Gly		
165	170	175
Val Val Asn Asp Ala Thr Ser Val Val Leu Phe Asn Ala Ile Gln Asn		
180	185	190
Phe Asp Leu Gly Asn Phe Ser Ser Leu Lys Phe Leu Gln Phe Ile Gly		
195	200	205
Asn Phe Leu Tyr Leu Phe Gly Ala Ser Thr Phe Leu Gly Val Ala Ser		
210	215	220
Gly Leu Leu Ser Ala Tyr Val Ile Lys Lys Leu Tyr Phe Gly Arg His		
225	230	235
Ser Thr Asp Arg Glu Val Ala Ile Met Met Leu Met Ala Tyr Leu Ser		
245	250	255
Tyr Met Leu Ala Glu Leu Leu Asp Leu Ser Gly Ile Leu Thr Val Phe		
260	265	270

Phe Cys Gly Ile Val Met Ser His Tyr Thr Trp His Asn Val Thr Glu
 275 280 285
 Ser Ser Arg Val Thr Thr Lys His Ala Phe Ala Thr Leu Ser Phe Ile
 290 295 300
 Ser Glu Thr Phe Leu Phe Leu Tyr Val Gly Met Asp Ala Leu Asp Ile
 305 310 315 320
 Glu Lys Trp Lys Ile Val Ser Glu Thr Tyr Ser Pro Met Lys Ser Ile
 325 330 335
 Thr Leu Ser Ser Ile Ile Leu Ala Leu Val Leu Val Ala Arg Ala Ala
 340 345 350
 Phe Val Phe Pro Leu Ser Tyr Leu Ser Asn Leu Thr Lys Lys Thr Ala
 355 360 365
 Gly Glu Lys Ile Ser Ile Arg Gln Gln Val Ile Ile Trp Trp Ala Gly
 370 375 380
 Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala Tyr Asn Lys Phe Ala
 385 390 395 400
 Lys Ser Gly His Thr Gln Leu Pro Ser Asn Ala Ile Met Ile Thr Ser
 405 410 415
 Thr Ile Ile Ile Val Leu Phe Ser Thr Ile Val Phe Gly Leu Leu Thr
 420 425 430
 Lys Pro Leu Ile Arg Leu Leu Ile Pro Ala Arg His Leu Thr Arg Glu
 435 440 445
 Val Ser Ala Leu Ser Glu Pro Ser Ser Pro Lys Ser Phe Leu Glu Gln
 450 455 460
 Leu Thr Val Asn Gly Pro Glu Thr Asp Val Glu Asn Gly Val Ser Ile
 465 470 475 480
 Arg Arg Pro Thr Ser Leu Arg Met Leu Leu Ala Ser Pro Thr Arg Ser
 485 490 495
 Val His His Tyr Trp Arg Lys Phe Asp Asn Ala Phe Met Arg Pro Val
 500 505 510
 Phe Gly Gly Arg Gly Phe Val Pro Phe Val Pro Gly Ser Pro Thr Glu
 515 520 525
 Ser Ser Val Pro Leu Leu Ala His Gly Ser Glu Asn
 530 535 540

<210> 38
 <211> 546
 <212> PRT
 <213> Hordeum vulgare

<400> 38

Met	Gly	Pro	Asp	Leu	Gly	Ala	Leu	Ala	Leu	Arg	Tyr	Thr	Gly	Leu	Ala
1				5				10					15		
Val	Ser	Asp	His	Asp	Ser	Ile	Val	Ala	Ile	Asn	Ile	Phe	Ile	Ala	Leu
						20			25				30		
Leu	Cys	Gly	Cys	Ile	Val	Phe	Gly	His	Leu	Leu	Glu	Gly	Asn	Arg	Trp
						35		40			45				
Val	Asn	Glu	Ser	Thr	Thr	Ala	Ile	Val	Leu	Gly	Leu	Ile	Thr	Gly	Gly
						50		55		60					
Val	Ile	Leu	Leu	Cys	Thr	Lys	Gly	Val	Asn	Ser	Arg	Ile	Leu	Ile	Phe
65						70			75			80			
Ser	Glu	Asp	Ile	Phe	Phe	Ile	Tyr	Leu	Leu	Pro	Pro	Ile	Ile	Phe	Asn
						85			90			95			
Ala	Gly	Phe	Gln	Val	Lys	Lys	Gln	Phe	Phe	Arg	Asn	Phe	Ala	Thr	
					100			105			110				
Ile	Ile	Leu	Phe	Gly	Ala	Val	Gly	Thr	Leu	Ile	Ser	Phe	Val	Ile	Ile

115	120	125
Thr Leu Gly Ala Met Gly	Leu Phe Arg Lys	Leu Asp Val Gly Pro Leu
130	135	140
Glu Leu Gly Asp Tyr	Leu Ala Ile Gly Ala	Ile Phe Ser Ala Thr Asp
145	150	155
Ser Val Cys Thr	Leu Gln Val Leu Asn Gln	Asp Gln Ala Pro Leu Leu
	165	170
Tyr Ser Leu Val Phe	Gly Glu Gly Val Val Asn	Asp Ala Thr Ser Val
	180	185
Val Leu Phe Asn Ala	Ile Gln Asn Ile Asp	Leu Asn His Phe Asp Val
	195	200
Leu Val Leu Leu Gln	Leu Ile Gly Lys	Phe Leu Tyr Leu Phe Leu Thr
	210	215
Ser Thr Val Leu Gly	Val Ala Ala Gly	Leu Leu Ser Ala Tyr Ile Ile
	225	230
Lys Lys Leu Cys Phe	Ala Arg His Ser	Thr Asp Arg Glu Val Ala Ile
	245	250
Met Ile Leu Met Ala	Tyr Leu Ser Tyr	Met Leu Ser Met Leu Leu Asp
	260	265
Leu Ser Gly Ile	Leu Thr Val Phe	Phe Cys Gly Ile Val Met Ser His
	275	280
Tyr Thr Arg His Asn	Val Thr Glu Ser Ser	Arg Val Thr Thr Lys His
	290	295
Thr Phe Ala Thr	Leu Ser Phe Ile	Ala Glu Ile Phe Leu Phe Leu Tyr
	305	310
Val Gly Met Asp Ala	Leu Asp Ile Asp	Lys Trp Lys Leu Ala Ser Ser
	325	330
Ser Pro Lys Lys Pro	Ile Ala Leu Ser	Ala Val Ile Leu Gly Leu Val
	340	345
Met Val Gly Arg Ala	Ala Phe Val Phe	Pro Leu Ser Tyr Leu Ser Asn
	355	360
Leu Ser Lys Lys Glu	Ser His Pro Lys Ile	Ser Phe Asn Gln Gln Val
	370	375
Ile Ile Trp Trp Ala	Gly Leu Met Arg	Gly Ala Val Ser Ile Ala Leu
	385	390
Ala Tyr Asn Lys Tyr	Thr Thr Ser Gly	His Thr Ala Val Arg Val Asn
	405	410
Ala Val Met Ile	Thr Ser Thr Ile	Ile Val Val Leu Phe Ser Thr Met
	420	425
Val Phe Gly Leu	Leu Thr Lys Pro	Leu Ile Asn Leu Leu Val Pro Pro
	435	440
Arg Pro Gly Thr Ala	Ala Asp Ile	Ser Ser Gln Ser Phe Leu Asp Pro
	450	455
Leu Thr Ala Ser	Leu Leu Gly	Ser Asp Phe Asp Val Gly Gln Leu Thr
	465	470
Pro Gln Thr Asn	Leu Gln Tyr	Leu Leu Thr Met Pro Ser Arg Ser Val
	485	490
His Arg Val Trp Arg	Lys Phe Asp Asp	Lys Phe Met Arg Pro Met Phe
	500	505
Gly Gly Arg Gly	Phe Val Pro	Phe Val Pro Gly Ser Pro Ile Glu Arg
	515	520
Ser Val His Gly Pro	Gly Leu Leu	Gly Thr Val Thr Glu Ala Glu Asn
	530	535
Arg Ser		
	545	